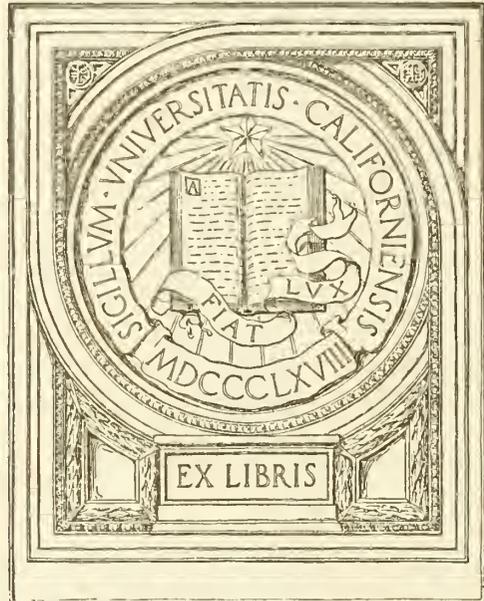


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SYMPOSIUM ON INTRAVENOUS THERAPY

(The following 5 papers were presented in symposium at the 161st Annual Meeting of the Medical Society of New Jersey, at Haddon Hall, Atlantic City, June 10, 1927).

INDICATIONS AND CONTRAINDICATIONS TO THE SERUM TREATMENT OF DISEASE BY INTRAVENOUS INJECTION

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Elizabeth, N. J.

An undigested foreign protein introduced parenterally into an animal causes antibody formation therein. An antibody is any constituent of the blood and tissue juices of inoculated immune animals which has a specific antagonism to the substance whose influence caused its formation. By virtue of its contained antibodies the serum of an immune animal may be used to produce specific passive immunity in a susceptible subject.

Serums are variously termed antiserums, antitoxins, antibacterials, antidiphtherins, antivenins, antistreptococcins, et cetera. Some are protective against but one disease, while others contain antibodies opposed to several, but each type of antibody is specific against its causal substance. Serums are practically always administered parenterally—subcutaneously, intramuscularly, intravenously, intraspinally, intraperitoneally or intraventricularly. Intravenously they are utilized chiefly in hemorrhage, chronic arthritis, diphtheria, te-

tanus, scarlet fever, meningitis, measles, pneumococcus pneumonia of types 1 and 2, and erysipelas.

Intravenous injection renders antitoxin available to the tissues 4 times as quickly as does intramuscular and 10 times as speedily as does subcutaneous, so it is particularly indicated when haste is essential; it affords the patient the most prompt therapeutic results, the maximum therapeutic efficiency of the serum, and the maximum chance of recovery from the disease. When it seems indicated the subject should receive it at once, and its administration be neither delayed nor employed only as a last resort. Furthermore, a provisional diagnosis is certainly not in itself a contraindication to intravenous serotherapy; for example, every case which is clinically diphtheria should be treated as such immediately, without waiting for a positive bacteriologic diagnosis and in spite of negative bacteriologic findings.

The risks of intravenous serum injections are considerable in (a) greatly weakened patients; (b) the aged; (c) those with dropsy, pulmonary edema, or heart disease—not because of the volume of serum introduced but because in such cases a reaction is particularly to be dreaded; (d) patients thought to have status thymicus; (e) patients known to be idiosyncratic to certain proteins, foods, pollens, drugs or sera—as are victims of hay fever, asthma, and urticaria; (f) patients who are anaphylactic. An undigested foreign protein introduced parenterally into an animal causes not only antibody formation therein but further changes by which the subject be-

comes extremely sensitive, or anaphylactic, to a second introduction of the same protein. This condition develops after a variable period, usually within a week, and may disappear gradually within a month or persist almost indefinitely.

Specific anaphylaxis has been developed in guinea-pigs by applying dressings saturated with horse serum to the eroded skin, showing that sensitization may be induced through the broken skin as well as by other parenteral routes¹. A child has been reported as sensitized by absorption of waste products from a second degree burn². Anaphylaxis has resulted from intestinal absorption of undigested foreign proteins during acute diarrheas³. Undoubtedly the nasopharynx is responsible for many other inexplicable anaphylaxes. Anaphylactic reactions have been mentioned as occurring from a few months to several years after the time of sensitization⁴. Spelmann described grave reactions in himself and in a nurse after preventive injections of 2.9 c.c. of diphtheria antiserum; he had received a similar injection 23 years before, and the nurse 14 years before; his wife, who was injected for the first time, remained symptomless⁵. David and Williate cite a case in which the sensitizing dose and the injection unleashing the anaphylaxis were 19 years apart⁶.

Reactions of any kind have no relation to the therapeutic properties of the serum, and would similarly be produced by normal horse serum. They may be caused by too speedy injection, by too great a quantity of serum, by a cold or impure serum, by allergy, or by anaphylaxis, and the tendency thereto increases with the age of the patient, no matter what introductory method is used. In 148 cases reported by Hecksher⁷ intravenous injections of diphtheria antitoxin seemed to induce fewer reactions than did the intramuscular route.

Serum reactions are of varying intensity, and of 3 types: serum sickness, thermal response, and shock or collapse:

(1) Serum sickness occurs in about 60% of cases, usually within from 2 to 12 days after the injection, and is characterized by (a) skin eruptions, which may be erythemat-

ous, urticarial, papular, vesicular, or even hemorrhagic; (b) regional adenitis; (c) pain in joints and muscles; (d) fever; (e) edema, commonly of the face and dependent parts, as in nephritis, but it precedes the accompanying albuminuria, whereas in nephritis the albuminuria precedes the edema. Rarely headache, nausea, vomiting, and an increase of lymphocytes in the spinal fluid take place, suggesting a meningeal reaction, and doubtless accounting for certain paralyses following serum injections⁸. Serum sickness is very annoying, but complete recovery ordinarily ensues within a week.

(2) In about 40% of cases there occurs either at once or within an hour a chill and rise of temperature lasting about 2 hours. This type of reaction to serums has been used very profitably in nonspecific therapy, as pyrexia is known to increase leukocytosis, plus probable further helpful changes in the human economy, and has been particularly of service in the treatment of general paralysis.

The advantages of intravenous nonspecific serotherapy are so great that they deserve special mention: "(a) The thermal reaction can be produced at will. (b) The height of temperature can be approximately controlled by regulating the dose in each instance. (c) The resulting leukocytosis may be of advantage. (d) The patient is not inoculated with a diseases-producing organism."⁹

(3) In about 1 of every 20,000 primary, or supposedly primary, injections, most alarming symptoms may arise very soon after or even during administration, and are characterized by a feeling of suffocation, extreme dyspnea, nausea, weak and rapid pulse, cyanosis, collapse, and sometimes sudden death.

The manufacturers of serums strive to lessen the occurrence of reactions by having their products accurately standardized, concentrated to increase their potency, with all nonessential proteins reduced to a minimum, sealed in insoluble glass ampoules, and sterile. Samples of each lot are passed upon by the Hygienic Laboratory of the United States Public Health Service before being put on the market. The physician should strive to lessen the occurrence by investigating the pa-

tient's history for previous serotherapy, asthma, hay-fever, hives, and enteritis; by performing tests for serum sensitiveness; by the use of a warm, fresh, concentrated serum, introduced into the vein at the rate of no more than 1 c.c. per minute for the first 6-8 c.c., after which it may be injected more rapidly; by close watch of the pulse, respiration, and general condition of the patient; by immediate discontinuance of injection upon the appearance of discomfort or other untoward signs in the recipient; and by having at hand, ready for use, a hypodermic syringe containing 1 c.c. of 1:1000 epinephrin solution and 1/100 gr. of atropin, with more of each in reserve for use if needed.

The skin tests for hypersensitiveness seem in over 90% of cases to be unreliable, according to experiments performed in the Willard Parker Hospital in New York. The New York City Department of Health commends the conjunctival test as the most reliable indication of sensitiveness to serum. Its technic is simple: 1:10 dilution of serum is instilled into the conjunctival sac, and if an acute local reaction occurs, a general reaction may be expected from the injection of any amount of serum, intravenously or otherwise. The conjunctival irritation may be promptly overcome by instilling epinephrin solution. The preliminary eye test may be performed on all patients or only on those whose history or condition warrants it.

Given a patient with a suspicious history or a positive eye test, intravenous serotherapy may be abandoned, or "Desensitization practiced by subcutaneous injection of a very minute amount, say 0.025 c.c., and doubling the dose every half hour until 1 c.c. is given. Then 0.1 c.c. is injected intravenously, and this dose doubled every half-hour until the desired quantity has been administered¹⁰." The use of a curative dose of serum, however, may be imperative, and it should not be withheld if the disease is more dangerous than the possible or probable reaction is likely to be.

The specific remedies for serum reactions are adrenalin and atropin, (to which may safely be added ephedrin, which produces quite similar results, and of longer duration) in

their usual dosage, repeated as needed. A severe reaction may demand the epinephrin intravenously in order to save time. General supportive measures are, of course, in order.

Immunization against disease is rapidly becoming widespread as a preventive measure. Practically all serums are procured from horses, and it is contended that immunizing doses of antitoxin contain enough horse protein to sensitize the recipients thereto, and thereby to proscribe all further serotherapy¹¹. If this be true, we have consolation in the successful detoxification of bacterial poisons (except botulinus toxin) without impairment of their immunizing properties by mixture thereof with sodium ricinoleate¹². No patient rendered immune by this combination is sensitized to foreign protein, since soaps are not antigenic. Reinjections will be entirely safe, and serotherapy much less hazardous.

The present chief objection to intravenous serotherapy is the possibility of the occurrence of an acute anaphylactic reaction even before the injection is completed. A physician may give thousands of intravenous serum treatments with few or no consequences, but once he has experienced the clinical picture presented by the sudden collapse of a patient almost into or actually into death itself, he will hesitate long before inviting in any way a possible repetition of such an event. It is the shock type of reaction which leads even enthusiastic advocates of intravenous serum medication to admit that the slower routes of administration are preferable if satisfactory therapeutic results may thereby be attained.

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The first one I had I thought the patient was dying and I thought I was dying, too. Any man who has been through it will certainly take his time before he will take another chance.

THE PRINCIPLES OF INTRAVENOUS MEDICATION IN BIOLOGIC AND CHEMOTHERAPY

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DISCUSSION

Dr. R. L. McKiernan (New Brunswick): I am sorry that Dr. Spencer did not say something about the injection of sulpharsphenamin. I notice Dr. Kolmer is here and I want to pay a tribute to Dr. Kolmer's sulpharsphenamin. I think that is about the greatest contribution the world has ever seen to medicine. The excellent results we have achieved from it are so much better than from neoarsphenamin; we get hardly any reaction at all from the sulpharsphenamin. I am taking this up from the genito-urinary standpoint, not from that of the general medical man at all. The risks in administration we have found have been practically nil. Another factor we must consider is the administration of foreign proteid. We have had some experience in the administration of foreign proteid in gonorrhoeal arthritis, and also in the administration of milk proteid for the treatment of advanced tabes or endarteritis. I have had 2 or 3 cases of that come under my observation in the last year and I have noticed the administration of foreign proteid has tended to aggravate the condition. By taking that away immediately and administering the sound luetic treatment the patient has always improved.

In regard to gonorrhoeal arthritis, the administration of any foreign proteid outside of mercurochrome has been very disadvantageous. The serum reaction from it has been very severe; in fact, some patients have almost gone into syncope. I might mention we give calcium chlorid. I have seen the temperatures go up to probably 106°. In about 6 hours that reaction would pass off and the condition would subside; the pain was almost immediately relieved.

Manufacturer's agents come around with glowing reports of their product, before we have any clinical facts to go by. I think there is one word of warning which should be given to the medical men at large—to take all these reports of the manufacturing chemists with a grain of salt until we have some reliable reports from bacteriologists who are doing a great deal of research work and can give us definite clinical reports on the subject.

Dr. G. T. Spencer (Elizabeth): I want to thank Dr. McKiernan for his courtesy and I am glad to hear more detail of the results of the nonspecific intravenous serotherapy.

There is really no closing remark to be made except to repeat that all of us hesitate long before giving an intravenous dose of serum, especially if we have experienced one of the acute reactions.

Intravenous medication, so popular today, may be said to have had its origin in necessity rather than choice, first, as a life saving procedure in the form of infusions of blood or saline solution for the treatment of severe hemorrhage and surgical shock and of quinin for malignant malaria and secondly, as a saver of pain and disability in the administration of arsphenamin or salvarsan which was originally given by subcutaneous or intramuscular injection. Only 15 years ago intravenous injections were regarded as minor surgical operations confined to the practice of relatively few physicians but since the introduction of arsphenamin and especially of neoarsphenamin for the treatment of syphilis, the technic has become so greatly simplified and efficient that this route of medication is or should be now within the reach of almost all physicians. This is indeed a fortunate outcome because intravenous medication has a particular field of usefulness in the ever expanding domains of serum and chemotherapy, although not a few physicians have over-emphasized its value and indications while others have gone to the opposite extreme when in truth its indications and contraindications are now rather sharply defined, as I hope to make clear on the basis of laboratory and clinical experience in biologic and chemotherapy.

PHARMACOLOGIC ASPECTS

Intravenous injections naturally intensify the pharmacologic action of the inoculum upon the important nerve centers, as those of cir-

culation and respiration; they likewise tend to intensify the toxicologic effects and may bring into play immediate or almost immediate toxic reactions which do not occur by other routes of administration.

It is quite necessary, therefore, for the physician to have a good working knowledge of the pharmacologic action of medicaments given by intravenous injection not only in order to avoid over stimulation but likewise for the selection of drugs for immediate physiologic effects in emergencies, such as the injection of cardiac and respiratory stimulants, adrenalin chlorid, etc. Furthermore, the intravenous injection of a drug may profoundly change its pharmacologic effects. For example, magnesium sulphate by mouth may act as a cathartic, but by vein it is anesthetic by means of depressant effects upon the central nervous system and thereby is of value in the treatment of tetanus, eclampsia and strychnin poisoning; potassium iodid by mouth is ordinarily harmless, but by vein the potassium ion is a neuromuscular depressant, sodium iodid being much less toxic because of a lesser toxicity of the sodium ion; a vaccine, serum or other soluble foreign protein introduced into the blood may produce a colloidal shock reaction of therapeutic value, and better known as a foreign protein reaction, not ordinarily obtainable by other routes of administration.

The question of rate absorption is not raised in intravenous medication because of the injection of the medicament directly into the blood, but that of rate of elimination is of frequent importance. As a general rule, medicaments which are quickly absorbed are also quickly eliminated and this is sometimes a distinct drawback to intravenous therapy. For meeting emergencies, absence of the time factor in absorption in intravenous medication is at once its most important value; furthermore, none of the inoculum is fixed or absorbed by the tissues as in subcutaneous or intramuscular medication and all is placed in the blood for high concentration over at least a brief period of time. It is no wonder, therefore, that the intravenous injection of blood, saline or glucose solutions, of diphtheria, tetanus and scarlet fever antitoxins as well as of anti-

streptococcus serum and pneumococcus antibody solution, are frequently of inestimable value; as likewise of arsphenamin and its congeners in acute syphilis, of quinin in malignant malaria, of the dyes, mercurials and other compounds in acute bacterial infections, shortly to be mentioned in more detail.

It is true that substances injected into the blood rapidly disappear either by elimination in the urine and bile or by tissue fixation but in the treatment of acute infections and especially of the bacteremias it would appear that the principle of high concentration of medicament, even though for but a short time measurable in hours, is the correct one. For this reason, serum therapy and chemotherapy tend in the direction of large doses which are in some cases impossible or at least inadvisable by subcutaneous or intramuscular injection by reason of bulk of inoculum and the production of severe pain, disability or even necrosis of tissues. For more lasting effects, however, subcutaneous or intramuscular injections are to be preferred and for this reason the latter should ordinarily follow intravenous medication if possible and likewise prove the route of choice in the treatment of chronic infections and, notably, of syphilis because of slower absorption, slower elimination and thereby longer contact between medicament and parasite.

TOXICOLOGIC ASPECTS

From the toxicologic standpoint several phases of intravenous medication are deserving of special mention. Indeed, these are so important that it may be conservatively stated that the method is never the one of choice if the more usual routes of administration suffice, and this is especially true in the case of the aged, greatly weakened individuals and, at times, those with hypertension and advanced cardiovascular disease because of the chances of a dangerous increase of blood pressure, pulse and respiratory rates as the result of fear, excitement, physiologic action of the inoculum or bulk of injection.

In the first place, the medicament may be brought into immediate contact with the higher centers in a dangerous concentration, with an intensification of toxicologic effects,

and especially in the administration of strophanthin, adrenalin or insulin, although by careful selection of dosage and the slow or intermittent injection of dilute solutions this hazard may be greatly minimized.

In the second place, intravenous medication may be particularly dangerous when the patient is known to be, or suspected of being hypersensitive to the medicament. This is especially true in relation to the intravenous injection of horse immune serums and particularly in patients with asthma, hay-fever or urticaria. The natural allergic states to serum and drugs like quinin and arsenic are especially dangerous, but acquired allergic sensitiveness as the result of former administrations may be likewise important, not because intravenous medication may produce fatal shock but because the reaction may be very alarming and demand administration of adrenalin for correcting vasomotor paralysis.

In the third place, the chemical and physico-chemic properties of the blood so essential for well being are easily disturbed with the production of shock reactions. The mechanism of these is not well understood but commonly believed to be due to disturbances of colloidal equilibrium, and especially those following intravenous injection of the heavy metals, vaccines, serums and other foreign proteins, and commonly expressed by chills, fever, sweats and leukocytosis. On the other hand, however, reactions of this kind are sometimes deliberately sought for their therapeutic effects, under the designation of foreign protein shock reactions, and are best elicited by intravenous injection of the chosen agent.

But another type of colloidal shock reaction is apparently due in some instances to the production of intravascular hemolysis and agglutination, or of precipitates resulting in embolic effects. For this reason, the inoculum should not affect the blood corpuscles or precipitate the plasma proteins, must be free of aggregates, isotonic, conform as closely as possible to the pH 7.4 reaction of the normal blood, and yield clear or satisfactory colloidal solutions. Substances definitely acid or alkaline, and especially solutions of the organic arsenicals, substances which do not yield per-

fectly clear solutions, emulsions of fats and oils and suspensions in general, unless extremely fine, very dilute and slowly injected, are all potentially harmful.

Furthermore, the drugs should be of established purity as determined by chemical analysis and animal tests. The water should be freshly distilled and sterile and especially when large amounts are injected, as in the infusion of solutions of arsphenamin, normal or hypertonic saline solutions, glucose and sodium bicarbonate solutions, since it would appear that among the most important causes for febrile reactions are the products of bacterial activity in stale waters or alkaline substances dissolved out from soft glass containers. Needless to state, the inoculum must be sterile and the injection conducted with scrupulous aseptic care, due precautions being taken against decomposition during sterilization and especially in the preparation of sodium bicarbonate and glucose solutions. Even the rubber tubing demands preliminary preparation, if new, to avoid contamination with antimony compounds when injections are given by gravity, as in the administration of saline, glucose, sodium bicarbonate, immune serums and especially arsphenamin.

In addition, the concentration of drug and rate of injection are highly important in relation to toxic reactions, and it is always a good general rule to inject concentrated solutions very slowly through a small gauge needle. Rapid administration of concentrated solutions may bring the drug in contact with vital centers and hypersensitive tissues in dangerous concentrations, break down the normal physico-chemic balance of the blood or produce dangerous aggregates and precipitates, while the rapid injection of large volumes of dilute solution may embarrass the cardiovascular system.

Therapeutic Aspects

Despite these possibilities of producing toxic reactions, intravenous medication can be safely employed in the great majority of instances although its haphazard and empiric practice is to be greatly regretted and leaves one won-

dering why serious accidents and reactions are not more frequently encountered.

In my experience the following precautions have been found of most importance:

(1) The use of sterile, *freshly distilled water* in order to avoid the injection of fever-producing substances so apt to be present in stale water. Distilled water hermetically sealed in hard glass containers is ordinarily satisfactory.

(2) The *slow injection* of conservative doses of drugs *properly diluted* like 50 c.c. of 5% magnesium sulphate; 100 c.c. of 10% glucose; 25 c.c. of 1% calcium chlorid; 10 c.c. of 10% sodium iodid; 5 to 20 c.c. of 1% mercurochrome; 10 to 40 c. c. of 0.5% gentian violet, acriflavin or tartar emetic; each 0.1 gm. arsphenamin per 20 c.c. of water; etc. The first dose of the arsenicals, the heavy metals and dyes, or of a foreign protein, should always be smaller than usual if the sensitiveness of the patient is an unknown quantity, the solution filtered unless perfectly clear and air bubbles carefully removed. When a syringe is employed, the needle should not be larger than No. 22, a flash of blood should always be elicited and meticulous care against perivascular injection observed.

(3) If a horse immune serum is being administered, enough time should be taken to determine by question whether the patient is asthmatic after contact with horses. If so, it should not be given by any route of injection because even subcutaneous injections may be extremely dangerous. Inquiry should also be made if any kind of serum and especially diphtheria antitoxin had been injected on a former occasion. If so, it is always advisable to give 1 c.c. of the serum to be injected subcutaneously for desensitization 1 hour before the balance is slowly injected intravenously. Pneumococcus antibody solution, however, may be ordinarily given without this precaution because it contains so little horse protein and previous T-A diphtheria vaccination does not ordinarily sensitize individuals. Otherwise, the serum may be given intravenously at once but the first few cubic centimeters should be always injected very slowly with a careful watch of the pulse, respirations and

color of the patient, and it is my practice to give the preliminary 1 c.c. by subcutaneous injection 1 hour beforehand to almost all cases, to conduct an intracutaneous skin test by injecting 0.1 c.c. of 1:5 dilution of serum when in doubt regarding horse serum sensitiveness, to prefer the injection of concentrated serums composed of solutions of the globulin fractions when obtainable, and to have in readiness a syringe carrying 1:1000 adrenalin chlorid for the subcutaneous injection of 0.5 to 1.0 c.c. or the intravenous injection of 0.1 to 0.2 c.c. if an emergency arises. The same precautions are advisable when goat and cattle immune serums are given but are not required for the intravenous injection of immune or convalescent human serums although in these the question of agglutination may be advisable as it is in blood transfusion if donor and patient belong to different groups.

INDICATIONS FOR USE

As previously stated, intravenous medication should never be the method of choice if subcutaneous, intramuscular or oral routes of administration are possible and meet the requirements. As a general rule, intravenous injections are indicated under grave circumstances, in acute conditions and emergencies or when the medicament is of such a nature that it cannot be otherwise administered. It is not possible in a page or two to adequately cover the indications and conditions in which it is particularly serviceable although those may be briefly mentioned as follows:

(1) Blood transfusions in severe hemorrhages, septicemias, gas poisoning, some of the anemias, and as a supporting measure in chronic infection. The intramuscular injection of 20 to 30 c.c. of blood may suffice for checking hemorrhage even in hemophilia but when hemoglobin is required for internal respiration there is no real substitute for intravenous infusion and I know that it is frequently a life saving procedure in acute bacterial infections and septic states.

(2) The value of infusions of physiologic saline solution or 6% acacia solutions in dose of 500 to 1000 c.c. in severe hemorrhage and surgical shock, as well as of plain saline or

5 to 10% glucose solutions in shock to increase blood volume and restore fluid loss, are well known. Also, of plain saline or glucose solutions to combat toxemia and correct dehydration in asthenic uremia; of glucose solutions to supply energy, as preliminary to operation, to combat acidosis, correct the hypoglycemia or diabetes mellitus, in the treatment of pernicious vomiting of pregnancy and following venesection in the treatment of eclamptic convulsions.

(3) Infusions of 100 to 150 c.c. of 15% (hypertonic) saline solution to produce dehydration of the subarachnoid space in increased intracranial pressure is sometimes required. Likewise, 50 c.c. of 5% or 20 c.c. of 10% magnesium sulphate in eclampsia and tetanus, or for anesthesia; 25 c.c. of 1% calcium chlorid in tetany and other neuromuscular conditions; 50 to 100 c.c. or more of 5% sodium bicarbonate in acidosis or in combination with saline or glucose for increasing the output of bile pigments in postoperative drainage of the gall-bladder.

(4) The intravenous injection of insulin in emergency cases of diabetes with profound coma requiring immediate results is of value in exceptional emergencies.

(5) The intravenous injection of 10 to 20 c.c. of 1:1000 mercuraphen or metaphen are apparently helpful in combating the acute bacteremias and septicemias, especially by streptococci and staphylococci, while the primary focus receives the maximum of attention it deserves; or of 10 to 25 c.c. of 1% mercurochrome, the former being preferred because accompanied by little or no immediate hemoclastic reactions or late toxic disturbances of the kidneys, gums and lower gastro-intestinal tract; of gentian violet or neutral acriflavin in dose of 20 to 40 c.c. of 0.5% solutions in the same infections and especially in the presence of nephritis when the heavy metals are contraindicated; of tartar emetic in dose of 2 to 10 c.c. of 1% solutions in granuloma inguinale and other nonsyphilitic venereal ulcers; of quinin in dose 10 c.c. of 5% (7½ grains) solution in malignant malaria; of emetine hydrochlorid in dose of ½ grain for amebic dysentery, and especially amebic abscesses of the liver; of gold thiosulphate in

dose of 0.1 gm. in lupus erythematosus; of sodium iodid in dose of 1 or 2 gm. in neurosyphilis and especially visceral syphilis with threatening gummas; of sodium thiosulphate or thiosinamin in dose of 1 gm. in the treatment of arsphenamin dermatitis and other intoxications by arsenic and the heavy metals; of arsphenamin, neo-arsphenamin, sulpharsphenamin and tryparsamid in acute and chronic syphilis, and especially of the arsphenamines in acute, early syphilis when prompt and complete destruction of *Spirochaeta pallida* is demanded, although intramuscular injections of sulpharsphenamin and bismuth are of greater value in chronic syphilis where slower elimination is more desirable; these are a few of the more important examples of intravenous medication in relation to the chemotherapy of bacterial and some protozoan diseases.

(6) The intravenous injection of 5000 to 10,000 units of diphtheria antitoxin in all severe infections and particularly of the larynx is frequently a life saving procedure; of 10,000 to 20,000 units of tetanus antitoxin in association with the intraspinal injection of 500 to 10,000 units which have greatly improved the prognosis in the dreadful lock-jaw; of 100 c.c. of antistreptococcus serum in cellulitis, puerperal sepsis and other streptococcus bacteremias and septicemias; of 50 to 100 c.c. of Huntoon's pneumococcus antibody solution as early as possible in lobar pneumonia, which has still further improved the specific treatment of the "captain of death", and especially of type I and the more dreadful type II infections, with practically no danger at all of anaphylaxis or colloidal shock reactions; of 50 to 100 c.c. of antimeningococcus serum in the early days of the terrible epidemic cerebrospinal meningitis; of 100 c.c. of anti-anthrax serum along with neo-arsphenamin in malignant pustule and especially when the bacilli are found in the blood; of 50 to 100 c.c. of antigonococcus serum in those occasional cases of severe gonococcus sepsis; of 50 to 100 c.c. of mixed gas gangrene serum in those dreadful wound infection with *B. Welchii* and the bacillus of malignant edema, especially after amputations; of 25 to 50 c.c. of antiscarlet fever serum in severe or an-

ginose cases of this disease when the patient is overwhelmed at the outset with the toxins of the streptococcus and of 50 to 100 c.c. of anti-erysipelas serum for severe, spreading erysipelas; are some examples of intravenous medication in serum therapy which should be ordinarily followed by one or more intramuscular or subcutaneous injections of smaller doses for slower absorption and more prolonged effects when the acute toxemia or bacteremia or a combination of both has been overcome by the intravenous administrations.

(7) Lastly, the intravenous injection of typhoid or other vaccine, peptone or other soluble protein for eliciting the disagreeable but seldom dangerous and sometimes decidedly helpful therapeutic colloidal shock reactions in the treatment of chronic arthritis, chronic iritis, chronic salpingitis and some other chronic infections, is deserving of mention when intramuscular injections of milk or milk proteins or other agents of this class fail or are objected to on account of discomfort. Unfortunately, glucose is the only food substance so far known capable of intravenous administration but it is hoped that future investigations will evolve practical methods for administering sustaining amounts of food and especially of vitamins by this route of administration; certainly it is a subject richly deserving of more attention than hitherto given it.

DISCUSSION

Dr. G. T. Spencer, (Elizabeth): I know we all agree that we have heard a splendid talk. The doctor mentioned reactions in people who apparently had a congenital hypersensitiveness. It seems to have been proven recently that in diarrheas of childhood and infancy undigested proteins are absorbed through the gut, perhaps because of ulcers, and it is conceivable that patients with typhoid fever may be sensitized in the same way. By absorption of waste products from a second degree burn, children are claimed to have become sensitized to foreign proteins; and by the administration of horse serum dressings to the abraded skin absorption enough to sensitize patients has been reported.

I was glad to hear Dr. Kolmer mention the intramuscular administration of mercury and bismuth in syphilis. I think there is a tendency to neglect that part of syphilitic treatment for the very simple reason that the patient objects to the pain and discomfort of the intramuscular injection, but it shouldn't be neglected, for obvious reasons.

Finally, as far as intravenous therapy in general is concerned, it is a wonder that there aren't more bacteremias considering the apparently careless technic that is often used.

TREATMENT OF PNEUMONIA WITH PNEUMOCOCCUS ANTIBODY SOLUTION

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Pneumococcus Antibody Solution, with which this paper deals, is primarily a solution of the antibody principle derived from the horse serum of horses immunized against the Types I, II and III Pneumococcus. Certain experimental and theoretic evidence leads us to believe that the antibody content of a good immune serum is less than 1/100 of 1%. It is obvious, therefore, that horse serum, containing as it does 8% to 9% protein, is an extremely poor vehicle for administration of the immune bodies.

The antibody solution represents the attempt to remove the active principle or immune bodies from their natural vehicle, serum, and to place them in an innocuous vehicle, such as salt solution. The work on this problem was started in 1919 and was so far successful that the first cases were treated with this solution during the winters of 1920 and 1921. The principle, underlying the method employed in the purification, is to allow the antibody in the serum to combine with the pneumococcus organisms, to remove this antibody-organism combination from the serum, and to then dissociate the antibody from the organisms and recover it in solution.

Continuous work has been done since that time on further purification and the improvement of the processes of manufacture, and on clinical testing.

At this time, pneumococcus antibody solution represents the purest form in which specific immune treatment is available—these solutions containing only from 12 to 15 mg. of nitrogen per 100 c.c.

Routine tests on the sensitizing action of the antibody solution indicates that 100 c.c. contains less than 0.25 c.c. of horse serum; an amount too small to produce any symptoms of serum sickness or of anaphylactic shock even in sensitive individuals and such symp-

toms have not been seen in over 200 treated cases.

It must be realized that although such solutions contain antibodies directed against the Types I, II and III Pneumococcus that the Type I antibodies predominate, that Type II are less numerous, and the Type III are still fewer in number. In other words 0.2 c.c. protects mice against 1 to 8 million fatal doses of Type I; 100,000 fatal doses of Type II; and 10,000 fatal doses of Type III. The solution, as to strength, is a reflection of the polyvalent serum from which it is derived, and the differences in potency as to the 3 types represents the difficulties in immunizing animals with these organisms.

There is little doubt that the most consistent results can be obtained with Type I Pneumococcus, but occasional brilliant results with the early treatment of Types II and III indicate that an early infection with these types can be controlled.

In evaluating the treatment of a disease such as pneumonia and establishing it on a logical basis, we must consider the pathologic lesions, the symptoms as they appear, the causation of death or recovery, and especially in considering the method of recovery and the fact that immune bodies appear in the circulation about the time of the crisis, we are forced to the conclusion that the presence of these immune bodies has some definite relationship to the spontaneous subsidence of the disease.

Pneumonia may be characterized as a local disease primarily, with certain generalized symptoms loosely called toxic manifestations. Whether such symptoms are due to true toxins generated in the lung and absorbed, is still open to question. But we do know that pneumonia may become a generalized disease with the production of a true bacteremia or septicemia. Statistical studies show that the presence of a bacteremia raises the expectation of death to 50%, while in its absence the expectation of death is 10%. It is probable that there is a constant leakage of organisms into the circulation and it is when these organisms become established and develop because of the lack of any antagonistic factor in the blood,

such as antibody, that the disease then becomes really serious. It is, moreover, possible that the so-called toxic symptoms are due to the presence of more or less numerous organisms in the blood stream coming from the lung and either in the living or the dead condition producing a deleterious effect.

It is obvious that since it has been shown experimentally that organisms and an antibody balance cannot exist at the same time in the circulation, that the introduction of a sufficient amount of antibodies will control this leakage of organisms from the infected lung and prevent the formation of a bacteremia, or, if the bacteremia is already established, eliminate it. Actual experimentation in both the animal and in the human has shown this to be true up to a certain point. It must be remembered that the influence of immune bodies on living bacteria takes place through the influence of a third factor, complement in some instances, and the action of leukocytes in others, and that these third factors must be furnished by the patient. If the patient is moribund or if he is so under the domination of the disease that these factors are no longer active, no amount of immune bodies will produce an effect. One realizes, therefore, that any specific treatment should be administered at the earliest possible moment, while the patient's factors concerned in the control are still active.

The practical results of treatment bear out this conclusion. In the original series of experiments made by Dr. Cecil, at Bellevue, the reduction in mortality of some 400 treated cases, over a similar number of controls, was 7%, taking the cases as they came in. On those cases which were treated within 3 days of onset, the mortality was reduced 13%, or 50% of that of the controls. On a series of Type I cases treated within 48 hours, the mortality was 8.9%. Recently, the Bryn Mawr Hospital near Philadelphia had the experience of treating 23 successive cases of pneumonia with this solution without a death, but most of these cases were seen early in the disease, the oldest case being 4 days after onset. It sometimes happens in cases that are treated within 24 hours of onset that the dis-

ease can be aborted. Another report was recently received of 3 patients treated within 20 hours of onset, all of whom had their crisis within 24 hours after the first injection of material. With later cases, this is seldom possible and the first favorable result is usually a reduction in temperature, a clearing up of the so-called toxic symptoms, the conversion of a severe disease into a mild one which then goes on to a crisis or lysis at about the sixth or seventh day. The mechanism of this result is probably due to the complete control of organisms in the blood stream as they leak into the circulation from the infected lung.

In the beginning of the administration of this solution as a therapeutic agent, an unexpected result was the causation of a so-called "foreign protein" reaction with a chill and a rise of temperature. This invariably followed the intravenous injection. Since that time changes in the technic of manufacture has controlled this factor in a considerable degree, so that less than 50% of injections are now followed by any reaction and those that occur are less violent than before and seldom are they alarming. Certain clinicians believe this reaction to be of benefit and ask for material known to cause such a reaction.

The method of administration is, by preference, the intravenous route since here the antibodies are placed directly into the circulation where they are expected to act. Subcutaneous administration is not successful in adults. Children, however, respond nicely to intramuscular injections and there are seldom symptoms of local irritation with this method. Children respond to this treatment, as a rule, very well and we have had several dramatic instances of over-night cures. The amount to be administered depends upon the age of the patient and the severity of the disease. It is always unwise to temporize after the decision has been reached to use a specific treatment. The 50 c.c. injection of antibody solution is good, but a 100 c.c. injection is better for a first dose, to be followed in 8 hours by a second injection of a similar amount. If after 2 such injections no improvement is manifest, further treatment is not indicated, since then the causative factor is likely to be

an organism other than the Pneumococcus I, II or III and one which is not affected by these particular antibodies.

Until the introduction of specific treatment no reduction in the mortality of pneumonia had been produced over a period of 50 years. With specific treatment, properly employed, not as a source of last resort, when the patient is moribund, but routinely early in the disease, preferably within 24 hours of onset, it can, in my opinion, be conservatively stated that the present mortality from pneumococcus pneumonias can be reduced by one-half and possibly more.

Opposed to this view, is that of Kessel and Hyman of Mt. Sinai Hospital, New York City, who in a series of 56 treated cases had a mortality of 34% and express doubts as to the value of this specific treatment in hospital practice. They, however, report 7 brilliant results in their series as against their general pessimism.

It happened that in the first 50 cases that were treated by this method in 1920 there occurred only 2 deaths, a mortality of 4%. So, considering these two experiences and the experience at the Bryn Mawr Hospital referred to above, it appears that mortality statistics are unreliable unless a very large series is involved and that in smaller series only clinical observation can be relied on. In this connection, I wish to quote from a report made by Dr. John S. Sharp, of the Bryn Mawr Hospital:

"Young married woman, pneumonia left base, almost moribund, 48 hours history. Delirious, temperature 103.4°, with a double mitral regurgitation and failing compensation. Expectation of death in 12 to 15 hours. 85 c.c. antibody solution intravenously. Marked change for the better after first dose. Second dose, 100 c.c. given 8 hours later. Brilliant recovery."

A second case kindly furnished by Dr. John Kolmer of Philadelphia again illustrates this point of clinical observation:

Male child, 8 years old, temperature 104°-105°, delirious. Lobar pneumonia of right upper lobe. At 10 p. m., about 18 hours after onset, received 50 c.c. antibody solution intramuscularly. Three and one-half hours later the temperature had dropped 2°, with a marked improvement in the mental condition. Two hours later, the mental condition was entirely clear with a further drop in temperature. The patient then went on to an uneventful recovery.

Such observations as this, when repeatedly seen, can but convince the observer that he has at his disposal an agent of therapeutic power and one that can be used without danger of serum reactions.

It must be again emphasized that success depends primarily on early and sufficient administration. If this point is borne in mind and followed, pneumonia is placed on the list of diseases that will yield to prompt, proper and logical treatment.

DISCUSSION

Dr. John A. Kolmer (Philadelphia): I regard antibody solution as a notable achievement in immunology and of particular value in the treatment of a very dangerous disease. The product is really the antibodies removed from antipneumococcus serum and dissolved in saline, so that, as mentioned by Dr. Huntoon, there is practically an entire absence of those proteins from horse serum that are responsible for the anaphylactic and other types of reactions that may follow the intravenous injection of antipneumococcus serum. In other words it is not a serum, and we ought to distinguish in our terminology; it is much safer to administer than a serum.

Back in 1920 and 1921, when Dr. Huntoon first produced his antibody solution, I felt some fear in giving it intravenously on account of the rather sharp reactions that sometimes followed but, thanks to his industry, the technic has been improved to such a point that for my own part at least I have absolutely no fear at all in administering the solution intravenously.

My experience leads me to believe that a goodly part of the success is due to its early administration and there should be no delay in determining the type of pneumococcus producing the pneumonia. The situation is similar to the treatment of diphtheria. If we suspect the disease or know that it is present, our duty is to administer the solution first and have the bacteriology attended to later; but, on the other hand, it is advisable to always type the sputum, because the type of organism found is a good guide to the amount of antibody solution to administer. If a type II or III pneumococcus is found, we may rest assured that the patient will probably require administration of more of the antibody solution than if it were a straight type I infection. This has helped me out in 2 cases during the past winter occurring both in aged men and one of whom had a bilateral pneumonia and whom I believe would doubtless have perished under the ordinary forms of treatment.

As Dr. Huntoon has stated, I think that we may sometimes evaluate these matters more by the impressions that we get from individual cases than from statistics alone. One of the most illuminating experiences I have had is the case that Dr. Huntoon saw fit to allude to in his paper, occurring in a child of 8 years, my own boy. Those of you who have had your own child so sick that death was feared, can appreciate the feelings of the father, leaving out those of the physician, when 3 hours after the administration of this antibody solution the little lad who had been previously unconscious opened up his little fever-congested eyes

and said—"Hello Pop!" You might know the feeling of relief; indeed, it goes beyond expression, and when a few hours later the temperature had reached practically the normal line and the child was then on the road to recovery, I can tell you that I was convinced of the value of antibody solution.

Dr. G. K. Dickinson (Jersey City): I hesitate to string a lot of words onto a discussion after these few papers so scientific and yet so informing that they can be practical. I have been waiting for the likes of Dr. Huntoon for many years. You men who know me, know that I am peculiarly subject to the pneumococcus, having had very severe lobar pneumonia, almost at death 5 times. Now my great handicap is a pneumococcal bronchitis. Nothing has been said about that. In the literature very little is said, and in your general daily work the cough is passed off as a cold, the germ not sought for, and consequently its specific treatment is not thought of. For instance, 3 weeks ago I went by accident to a room where there was a case of pneumonia. I walked right out. Within 3 days I had a tickling as if there was a feather shoved up into my nose. The next day I started with a very severe cough and bloody sputum. This happened to me over a hundred times and then for months I had a tenacious cough. Two or three times a day I almost cough my head off; the rest of the time I don't cough at all. This trip I bulged out my left hernia, or made one. Does your treatment help the pneumococcal bronchitis, sputum now being full of pneumococci? Can I take it in the serious stage of rhinitis and abort it? Can I put myself in a position so that I can again go back to a pneumonia patient and do my duty?

Dr. Julius Levy (Newark): I just want to ask Dr. Huntoon whether he thinks we can use this solution intraperitoneally in children? The intravenous method is frequently difficult, especially in young children, and we have found that intraperitoneal transfusions are very successful, and also the use of saline.

I feel we ought to say a word, too, in regard to judging the value of a new treatment by the method of personal impression rather than statistics. I know that the method of personal impression is the one that the doctor likes to accept, but if you will remember the history of therapy of pneumonia by that method, by this time we would have had thousands of specific cures. You know the men who swore that camphor cured pneumonia and they detailed prompt and sudden improvements from the use of camphor. I know that in my own experience, I followed the work of Bass at Mt. Sinai who reported a series of brilliant results in children with pneumonia that had with it anemia, and we used small doses of transfusions by the intraperitoneal route. We had several cases which acted exactly as the ones here referred to, and particularly Dr. Kolmer's child. I do not wish to imply by this that the careful clinical observation and impression in the hands of very conscientious and reliable persons is not important, but I think we must agree that the final proof of a new method of treatment must be by statistical methods, particularly in pneumonia which varies so much in different years, in the severity of the epidemic, and the virulence of the infection, and in the specific reaction of individuals. I am afraid if we ever adopt the impressionistic method of interpreting therapeutics we will be having a setback again in the accurate estimate of therapeutics.

Dr. F. M. Huntoon (closing discussion): In regard to meningitis, it was not said that antibody solution was the only method of treating pneumococcus infections. The only statement that was made was that it was a specific treatment in its purest form. You can cure pneumonia with anti-pneumococcal serum or you can cure pneumococcus meningitis with serum, possibly the same as you can with antibody solution. I see no reason why pneumonia cannot be cured by chemotherapeutic measures, which includes the quinine derivatives.

The whole question involved in the cure of pneumonia, as far as we have gone, is control of the bacteremia. If you can prevent the organisms from developing in the blood, you can reduce your mortality down to a very reasonable figure. I have seen cases in which bacteremia has been controlled, which then proceeded to die from an extension in the lung, or they may die from a bad heart or something of that kind, but these are rare, and Bloomfield's statistics show, as I mentioned, that in the absence of bacteremia your expectation of death is only 10%, while it is 50% in those in which it is present.

Dr. Dickinson asked a question about pneumococcal bronchitis. Of course, that is a very unusual condition and one in which I have had no practical experience. The first question, I should say in this particular case, is to determine which type of pneumococcus is bothering him, or whether it varies from time to time. A patient may recover from one type of pneumococcus and promptly have another pneumonia from another type; I have seen that occur. There may be a coincident infection with 2 types of pneumococcus, such as Dr. Kolmer's case, Types I and II. We had an instance in Boston of a physician who started out with pneumonia, was treated with antibody solution, promptly the temperature came down, remained flat for 24 hours, then started up again and another dose of antibody had no effect. Dr. Malory did the typing. The recrudescence was Type II. They certainly had to fight to save that man the second time. I saw a case in New York that ran through a complete course of Type IV, whose temperature stayed down for a week, started up again and had a Type I infection.

In this particular instance, where pneumonia you might say is endemic in this particular individual, and it is always a threat, I should say that an immunization, perhaps with a mixture of antibody solution and a pneumococcal product, would be the answer to his condition, and if the doctor will communicate with me afterwards, I should like to think that problem over and perhaps make him up a special preparation for such an attempt.

As to statistics, I will agree with Dr. Levy that in the ultimate analysis statistics will have to answer, but what good are statistics in one man's experience who is perhaps running 20 or 25 cases a year? It takes him a lifetime to collect enough cases to make his statistics of value. It was very unusual to be able to collect 400 to 500 treated cases and run them with adequate controls at the same time. You will have to admit that clinical observation extended over a sufficient number of cases and a sufficient period of time is just as valuable as statistics. You take the accumulated experience of a man who has used this specific treatment and listen to what he says.

I heard Dr. Rouselle, of Philadelphia, after using the material for 3 or 4 years say, "Young men, if you will use this treatment early, as it should be used, you will be surprised at the number of cases

you will get to defervesce suddenly and completely".

Dr. Conner, of New York, in his paper before the American Medical Association, said that these cases that apparently defervesce after treatment occur too frequently to enable you to dodge the question, but that you have obtained a specific effect.

The case which I quoted was a very severe one, this woman with a failing compensation. Three men saw that patient. They say all gave her about 12 to 15 hours, and she showed a prompt improvement after the first dose. I am not saying that you couldn't have done it with other treatment but we certainly accomplished something in this particular case. I think the same thing was true in the case of the elderly man of whom Dr. Kolmer spoke. There was a prompt improvement after the first dose. Those are all personal impressions of various men. When we collect 3000 or 4000 cases of pneumonia and as many controls, I am perfectly willing to rest the case on statistics, but for you gentlemen, you will have to rest your impressions on personal observations. In the ultimate analysis, the question of whether a man is going to use the material or not rests on his own judgment.

I didn't complete the question about meningitis. I know of 3 cases of pneumococcus meningitis which apparently were cured with antibody solution. One has been described to you. There is no doubt about that case and there is no doubt about the cure. An autopsy was performed afterward, when he came in to the hospital the second time, and that autopsy showed there were just a few old adhesions at the base of the brain remaining of the original meningitis.

CONCERNING THE DYE THERAPY OF ACUTE INFECTIONS

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The history of medicine is essentially a record of transitions, as an example of which the evolution of therapeutic methods is nearly always accompanied by a rather characteristic cycle: Regardless of the limitations expressed or understood by its originator, the new method is applied to a heterogeneity of pathologic processes under a variety of conditions; the inevitable quota of poor or even bad results follows, causing a swing of the pendulum to an extreme of pessimism; and it is only after time and evaluated experience have clarified the atmosphere that the true status and the real place of the method in the treatment of disease becomes apparent.

The comparatively recent utilization of dye

compounds in the intravenous treatment of acute infections, and particularly those accompanied or complicated by bacteremia, has given rise to a considerable literature, the perusal of which, however, establishes mainly the very confused status of this subject at present. While, on the one hand, startling and even dramatic instances are reported which suggests a rapid sterilization of the blood stream by the intravenous injection of dye compounds; on the other hand, equally significant reports are in direct conflict with such conclusions. It appears, therefore, that this subject must be restudied in the light of the experiences thus far recorded and that the rather arbitrary and, in some sense, empirical methods regulating the use of these substances must be revised in accordance with the various factors regulating their probable efficiency and the indications for their use. In any consideration of this subject it is necessary to distinguish between those dye stuffs which act as such and which are used without modification, and dye compounds whose efficiency depends upon the presence of various substances, such as the heavy metals, for example. Example of the first class are gentian violet and fuchsin, members of the triphenylmethane group long used as bacterial and tissue stains in the laboratory but recently of therapeutic interest as a result of the work of Churchman (Jour. A. M. A., 1923, 79:1657, and Jour. A. M. A., 1925: 85:1849).

Illustrative of the second class is mercurochrome, a product resulting from the combination of mercury and a fluorescent dye.

In any attempt to utilize these methods of treatment intelligently or to systematize them, it is necessary, first of all, to arrange, classify, and appreciate the cardinal factors influencing if not entirely determining their usefulness.

It is fairly obvious that the ever-present hope of a *therapia sterilisans magna* applicable to any or all infections has not yet been realized in the intravenous use of dye compounds; indeed, it is doubtful if it ever will be in the sense that a single dye or compound will suffice for any or all bacterial blood stream infections. They have, however, a distinct place

in the treatment of infections, but a place which only the studies of the future will clearly define.

It is unfortunate, but perhaps unescapable, that so many of the observations reported are accompanied by unsupported assumptions and clouded by lack of controls, and equally unfortunate that these methods are too often utilized only as desperate, "back-to-the-wall" procedures when the patient is all but moribund and his condition all but hopeless. In the interests of their earlier and more rational application, it is of use to summarize the available facts.

The 2 outstanding facts to be garnered from the available literature are:

(1) Under certain conditions and for certain bacteria, dye compounds may be bactericidal, and, still under certain conditions, such bactericidal property may be exhibited in the blood stream.

(2) For still other organisms, dye compounds may be bacteriostatic; capable of inhibiting their growth without necessarily encompassing their destruction, and this property also may be exhibited in the blood stream.

Experience has shown the necessity for some modification of the 2 conceptions which have hitherto dominated the chemotherapy of infection: the conception of a *therapia sterilisans magna*, and that of a special chemical affinity of the dye substances and the organism. The problem involves more than the bringing together in the blood stream of the bacteria and the compound as an event to be followed by the death of the organisms and the recovery of the patient. A variety of factors are involved which, under varying circumstances alter and influence the phenomena produced.

As Churchman has pointed out, there is lack of definition as to what constitutes a bacteremia, the term including a variety of conditions influenced by a variety of factors: (a) virulence of the invading bacteria; (b) resisting powers of the patient; (c) accessibility to treatment of the focus of infection, the source from which they invade the blood stream;

and (d), not least of all, the location and gravity of the secondary lesions resulting from bacterial localization in various tissues or organs.

It is of the utmost significance to remember also that in every bacteriemia the bacteria enter the blood-stream from some initial focus; that, moreover, this entrance may be and probably always is more or less intermittent and constantly repeated; and that the bacteria are removed from the blood stream by a defensive mechanism on the part of the host; namely, the concerted, sequential, and more or less predominant action of various protective resources among which are mechanical filtration by the lymph-glands; the formation of various antibodies; and phagocytosis. In the last analysis it is always the nature as well as the vigor and extent of the patient's reaction to infection which determines the result.

It is fallacious, as Churchman has said, to assume that in a bacteriemia the bacteria make repeated circuits of the blood stream, reproducing as they go, or that antibacterial substances travel with them. It is much more likely that there is a rise and fall in the bacterial content of the blood resulting from repeated influxes from the primary, and from secondary multiple foci as well, and influenced by repeated attempts by the defense agencies to cleanse the blood stream. The antibacterial substances also cannot remain long in the blood as such; they are removed in part by greater or less degrees of combination with the body substances and in part by more or less mechanical deposition and concentration in various tissues or organs.

These facts lead to the suggestion that perhaps undue emphasis has been laid in the past upon the *bactericidal* activity of dye substances, an emphasis indicated by their use in large amounts in the endeavor to secure a sudden, massive sterilization.

In relation to bacteria, dye compounds may be *bactericidal*—capable of producing bacterial death and disintegration; *bacteriostatic*—capable of inhibiting the growth and activities of bacteria; or both. Time does not permit

any discussion of the mechanism whereby these effects are produced, especially as the subject is one still requiring investigation. The belief may be expressed that the evolution of the intravenous therapy of bacteriemia with dye compounds has, perhaps, been retarded by the predominant emphasis laid upon their bactericidal properties and that attempts to achieve a *therapia sterilisans magna* have overshadowed all other possibilities, an emphasis mainly responsible for their use in large and even toxic amounts.

It is this use of massive doses in the attempt to sterilize the blood stream at one blow, and especially such use in all but moribund patients as a last resort, which has retarded and will retard the rational development of a valuable method of treatment. Chemotherapy, as Kolmer has said, cannot be dissociated from the possibility of chemopathology or toxic effects upon the tissues of the patient, effects which may be cumulative, dangerous, or even fatal.

Is the use of massive doses approximating the toxic dose routinely necessary or even advisable?

In the first place, it is to be borne in mind that not all dye compounds are equally bactericidal for all bacteria nor even for all strains of a single species. Of importance also is the relation between the tolerated dose and the curative dose, (or the chemotherapeutic index), for we are treating not only the disease but the patient who has the disease and upon whose tissues, as well as upon the bacteria, the dye compound exerts its various effects.

In the second place, the relation of the primary and secondary foci as regards their accessibility to treatment, as well as the presence of bacteria in the blood stream, are always to be considered as very definitely influencing the methods to be adopted.

In the third place, the *type* of bacterial infection must in the future exert some influence upon the *kind* of dye compound to be used.

And, finally, it can be debated whether mas-

sive, sudden and complete sterilization of the blood stream should be the sole, most important, or always even the most desirable consummation to be sought for.

Practically all bacteria, upon destruction and disintegration, liberate greater or lesser amounts of endotoxin, and a consideration of the inherent possibilities of a sudden liberation of massive doses of endotoxin consequent upon a rapid sterilization of a heavily infected blood stream warrants the assumption that this may not always be desirable. A consideration of all the factors which have thus far been discussed suggests that the rather empirical use of one or two dye compounds in arbitrary dosage based mainly upon body weight must in the future be replaced by some more rational plan to be evolved from the cooperative efforts of the laboratory worker and the clinician. In the light of present knowledge, the following premises may be suggested as furnishing, at least, a logical, if temporary, working procedure:

(1) That the presence of a bacteriemia be culturally established as a preliminary to intravenous dye compound therapy. This, of course, necessitates the bacteriologic study of the blood stream at a time approximating as nearly as possible the bacterial invasion. In other words, the possibility of bacteriemia should be thought of and a blood culture taken as soon as the initial chill and sudden marked rise of temperature suggests blood stream invasion and not left until a bacteriemia has existed for days.

(2) That not only the *kind* but the *degree* of bacteriemia in terms of colonies per cubic centimeter of blood be established by proper manipulation of the primary culture.

(3) That the choice of dye compound be determined, in some degree at least, by the degree to which it is efficacious for the bacterial species in question. This, of course, suggests the necessity for careful, systematic and extensive restudying of various dye compounds in relation to, at least, the more common pathogenic bacteria so that the extent and limitations of selectivity on the part of

dye compounds may be clearly established and more generally appreciated.

(4) That the *dose* be regulated by the degree of bacteriemia, the bactericidal effect being sought for to the highest degree in infections where the bacterial content is comparatively light, as evidenced by a small number of colonies per centimeter in the primary blood culture. In such cases a relatively large dose may be given at the start. In heavily infected cases, on the contrary, where massive and sudden absorption of large doses of endotoxin is not to be desired, the *bacteriostatic* effect of the dye compound is more to be sought for and achieved by comparatively small doses.

(5) The *frequency* of dosage to be governed, in the main by 2 factors: (a) the state of the bacteriemia as established by cultures taken before each dose; (b) the clinical condition, as indicated by cytologic studies of the blood, the leukocyte count and, notably, the leukocytic index. The leukocytic index is a valuable means of correlating the leukocyte counts with the clinical condition. Based upon the fact that polymorphonuclear increase takes place at the expense of the lymphocytes, the leukocytic index is obtained by dividing the polymorphonuclear count by the total (large and small) lymphocyte count. Under normal conditions the index will be between 1.9 and 3. In the presence of active and triumphant infections the index may reach 35 to 40, or even higher. In my experience the leukocyte index has been a distinct aid in regulating the frequency of administration of dye compounds, being unaffected by variations in the total and absolute counts.

(6) That treatment of the initial and secondary foci, when accessible, be considered an important if not essential part of the procedure.

(7) That the expectation of success be largely governed by the location and character of the secondary foci.

(8) Finally, that the resort to intravenous therapy by dye compounds be not left until the patient is in extremis.

THE THERAPEUTIC VALUE OF BLOOD TRANSFUSION

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The development of blood transfusion as a valuable therapeutic measure began about 15 years ago. Following the report by Landsteiner¹, in 1900, of the discovery of iso-agglutinins and iso-agglutinable substances in the blood, Jansky², in 1907, showed that all blood could be classified in 4 groups and Moss³, in 1910, made the additional discovery that isohemolysis of the blood cells never occurred without their previous agglutination. These contributions to our knowledge were the basis of the safe and simple methods now used for selection of compatible donors. The division of blood into 4 groups was based on the supposition that there were only 2 iso-agglutinins and 2 iso-agglutinable substances in the blood, but Guthrie and Huck⁴, in 1923, demonstrated the existence of a third iso-agglutinin and a third iso-agglutinogen. The discovery of these minor groups explained some of the hitherto unexplained post-transfusion reactions and made direct matching, as well as blood grouping, a necessary precaution in the selection of donors.

The principle of the use of universal donors for other groups depends upon the quick dilution of Group I (Jansky) serum which is known to agglutinate the cells of all other groups. "Dangerous Universal Donors"^{5, 6} have been described in which the agglutinating activity of the serum was so high that if they had acted as donors for individuals of Group II or IV a transfusion of 500 c.c. of blood would have caused some agglutination in those having a normal red cell count and fatal agglutination in those having a cell count of 2,500,000. Reactions, then, resulting from the agglutination of red cells can be avoided by selecting donors of the same group as the patient, by direct matching to detect minor groups, and by doing special tests in case only universal donors are available for other groups.

Doan⁷ recently pointed out that incompatibility may exist between the blood plasma of certain individuals and the white cells of others. He described a method for detecting this possibility and advised its use particularly in application to dangerously weakened patients in which even a mild reaction might be serious. Occasionally reactions occur because the patient is hypersensitive to some substance in the donor's blood. In my experience these reactions are usually mild and easily controlled by adrenalin. However, Duke and Stofer⁸ reported a case of severe allergic reaction after transfusion of 20 c.c. of blood, and they advised a preliminary intravenous injection of 1 to 2 c.c. of the donor's blood a few minutes before starting the transfusion.

I shall describe in some detail an allergic reaction which suggested the possible value of preliminary skin tests. The patient was a young man whose mother donated blood. They were of the same group and no agglutination occurred in direct matching. Immediately after the transfusion of 300 c.c. of blood the recipient developed a very marked urticarial reaction associated with dyspnea. The reaction was controlled by the hypodermic injection of 20 minims of adrenalin. Investigation revealed the fact that the patient had always developed an attack of enteritis whenever he ate liver and that his mother, the donor, had eaten liver the day of the transfusion. Intradermal injection of 0.2 c.c. of his mother's serum produced a prompt local reaction. A professional donor was selected for a second transfusion, on the following day. His serum caused no local reaction with skin tests and no general reaction followed the transfusion. The mother was kept on a liver-free diet one month and then the intradermal injection of her serum caused no local reaction.

In order to obtain further data regarding the value of such a test, I proceeded to make skin tests on unselected cases in the hospital wards with serum of donors from our professional list. In the first group, 12 patients were tested with the serum of 6 individuals, and in the second group 9 patients were tested with the serum of 9 individuals; in all, 153

tests. In the first group, 1 patient developed 3 positives; in the second group none were positive. The patient who showed 3 positives in the first group was then tested with the serum used for the second group and 2 positive reactions occurred. I have found nothing in literature on this subject and while no definite conclusions can be drawn from such a small number of tests, it is reasonable to believe that the 5 people whose serums caused such marked local reactions might also have caused general reactions if their blood had been used for the transfusion of that individual.

Even though preliminary injection of small quantities of blood or skin tests may not be necessary as a routine measure I feel that special precautions should be taken if the patient has an allergic history. Sometimes a patient reacts to the blood of a donor whose blood caused no reaction at the time of a former transfusion. This may be due to the development of hypersensitiveness on the part of the patient, to the ingestion of something by the donor for which the patient is already hypersensitive, to the development of hemolytic substances in cases of primary blood diseases, or to a change of the agglutinating strength of a universal donor. The only safe rule is to make compatibility tests before each transfusion.

In reviewing my records regarding reactions I found accurate data available in 420 cases. In these cases a reaction of some type occurred in 39 or 9.3%. The reactions consisted of a rise in temperature, chilling, urticaria or subjective discomfort, or combinations of these symptoms, but in no instance were hemoglobinuria or other evidences of severe hemolysis found. Eight transfusions were followed by an urticarial eruption appearing within a few minutes and lasting $\frac{1}{2}$ to 1 hour; 16 by a chill and rise of temperature of 2 to 3° and 12 by a rise of temperature of 2 to 3° the day following, without subjective symptoms; 3 complained of fullness of the head, dyspnea, tightness of the chest, or chilliness, or combinations of these symptoms.

Of the 16 reactions characterized by chill and rise of temperature, 10 occurred in cases

in which a universal donor was used for a patient of another group. This fact, considered along with the fact that of 40 cases in which I have used a universal donor for a patient of another group 13, or 33%, have shown a reaction of chill and temperature or rise of temperature of 2 to 3°, rather definitely places the blame for the majority of the more serious reactions.

Eight of the reactions occurred in pernicious anemia cases in which the hemoglobin and erythrocytes were greatly reduced and the hemolytic activity of the blood was markedly increased. In this class of patients, Kolmer⁹ has suggested that preliminary hemolysis tests as well as agglutination tests should be done. This added precaution would help eliminate the donors who were found to be especially susceptible to this increased hemolytic activity and thus the number and severity of the reactions could be reduced to a minimum.

The possibility of transferring syphilis from donor to patient is a serious danger. The same precautions should be taken with members of the family as with professional donors and donors must not only have frequent Wassermann tests but also be closely questioned regarding recent infections. It is apparent that the type of individuals used as professional donors is very important. In extreme emergencies one is justified in proceeding without the Wassermann test but not without compatibility tests. In selecting a donor for an infant it has often been alleged that the mother may safely give her blood without preliminary tests. Rapisardi and Pollitzer¹⁰ found that in 7 out of 25 instances the mother's serum agglutinated the cells of her off-spring. An infant should be subjected to the same tests as an adult. Although some professional donors are as much interested in the patient as they are in the fee, others go from place to place selling blood until their health is endangered. It takes a normal man about 1 month to recover a pint of blood.

In 1907, Crile¹¹ developed a practicable, though difficult, method for the direct transfusion of blood. In 1913, Lindeman¹² made the general use of transfusions possible by the

introduction of multiple syringes for the vein-to-vein method. The citrate method was introduced in 1914.¹³ Without entering into a discussion regarding citrate reactions, I may say that because reactions occurred in about 40% of the patients transfused by this method I discounted its use 4 years ago.

The Lindeman method was adopted because of its simplicity and flexibility. The apparatus is easily cleaned and can be readily inspected by the operator before beginning a transfusion. After transfusion is started inevitable interruptions may occur but with this method clotting may be controlled and the operation continued successfully. Furthermore, there is no danger of reflux of blood from septic patients to donors. However, transfusion technic does not depend upon the refinement of any one detail but upon careful observation of a large number of details.

The procedure is very much the same in children as in adults. In children under 2 years of age it is usually necessary to cut down on the vein. In infants it may be necessary to resort to the jugular vein. As regards dosage, 30 c. c. per kilogram of body weight for infants up to 18 months, and 15 c. c. per kilogram for children over that age are taken as standards.

For exsanguination transfusions the same technic is employed as for other transfusions, the blood being injected after or during the withdrawal of blood.

Transfusion is indicated in a large variety of conditions. Among the more important of these are hemorrhage, shock, severe burns, secondary anemia, nutritional disturbances of infancy, primary blood diseases and sepsis. In a series of 59 patients, 91 transfusions were given for sudden, large hemorrhage; 35 of these were for esophageal, gastric and duodenal hemorrhage; 19 for postoperative hemorrhage; 8 following accidents; 5 for ruptured ectopic or postpartum hemorrhage; and 19 for miscellaneous conditions. Following large hemorrhages, the replacement of blood loss with its immediate available supply of oxygen carriers and coagulating constituents assures us of uniformly good and many times spectacular results.

The fear that a transfusion of moderate amount will start bleeding in gastric or duodenal ulcers by raising the blood pressure has been proved groundless. As a matter of fact, in large blood loss when through transfusion the coagulation time is shortened, increased pressure is desired, and it is likely that reparative processes will be initiated more quickly when the blood loss is promptly made up. When hemorrhage recurs following the transfusion of ulcer cases it is, as a rule, due to a bleeding point that requires ligation.

Sudden large hemorrhage and shock are intimately associated. The indications for quick transfusion in shock are clear. There is an extensive capillary dilation with a large hemorrhage into these vessels and this results in a marked fall in the arterial blood pressure, an inadequate oxygen supply to the tissues, and finally a loss of blood plasma through the distended and permeable capillary walls. The injection of isotonic salt solution gives no lasting benefit. The tendency to permeation may be overcome by injection of gum acacia solution, but transfusion, if done early, restores the circulation and also corrects the serious oxygen deficiency of the tissues. Recently, there came to autopsy a patient who had died of shock without hemorrhage, following long labor and forceps delivery. A quick transfusion in this case might have been helpful. This sort of an emergency and the severe postpartum hemorrhages remind us that Titus¹⁴ suggestion to have a donor selected and available for all obstetric patients is well founded.

In severe burns the rationale of early transfusion is based on the fact that blood is concentrated in the capillaries, in burns, as in shock. Transfusion should be given within the first 6 hours to combat shock, and later exsanguination transfusions, to counteract the toxemia. Riehl¹⁵ reported a case with severe burns covering more than 40% of the body surface, whose life was apparently saved by transfusion. My own experience has been discouraging because the few patients that I have been called upon to treat were extensively burned and in the toxic stage at the time of transfusion. Patients suffering of sudden

large hemorrhage, shock, severe burns or illuminating gas poisoning are emergency cases and require immediate transfusion.

Benzol poisoning causes destructive changes in the hematopoietic system with an ultimate picture of aplastic anemia. Although transfusion is not curative in idiopathic aplastic anemia, we feel that it should be done early and repeatedly for benzol poisoning, in hope that the damage to the blood producing organs may not be permanent. McClure¹⁶ reported a case of severe benzol poisoning which was successfully treated with blood transfusions. In a period of 6 weeks, 5 large transfusions were given. He pointed out that sporadic transfusions are of little value in such cases. One case of benzol poisoning which I transfused twice died within a month of the onset of symptoms. His leukocyte count was 1800, platelet count 48,000 and the bleeding time 48 minutes. Another case, less toxic and more chronic in type, has also been transfused twice. In this instance recovery is expected because normoblasts and myeloblasts have appeared in his blood, indicating that the bone marrow is not completely destroyed.

Pre-operative transfusions convert many poor operative risks into relatively good ones. A fixed rule cannot be established for every case but it is conservative to suggest that prolonged bleeding or clotting time, hemoglobin of 50%, hemoglobin of 60% associated with sepsis, or exceptionally serious operations prone to produce shock are indications for pre-operative transfusions. Lahey¹⁷ says, "No longer may one defend his position when operating on a poor-risk patient who has not had a blood transfusion previous to the operation."

For secondary anemia, 73 transfusions were given in 68 cases; 33 of these were of uterine origin—fibroids, carcinoma, etc.; 19 were intestinal—ulcerative colitis, hemorrhoids, etc.; 5 were associated with syphilis; 2 with the genito-urinary tract; and 14 miscellaneous. A large number of the patients transfused for secondary anemia were preparatory to operation.

Larrabee¹⁸ described a type of grave anemia

associated with pregnancy which resembled pernicious anemia. In these cases the prognosis is bad without transfusion but with early transfusions the patients recover and the condition does not recur. I have transfused one patient of this type but unfortunately, as the autopsy revealed, it was too late, the bone marrow was worn out and she was in the aplastic, terminal, hopeless stage of the disease.

Two cases of acute uremia have convinced me that some of these patients need transfusion. The first was a child suffering of acute nephritis following scarlet fever, was in coma about a week, had repeated convulsions and the blood creatinin was 15 mgm. per 100 c. c. Complete recovery followed 3 transfusions. The second, was a pregnant woman who developed convulsions at the end of the seventh month and labor was induced. At the time of transfusion, the systolic blood pressure was 60, pulse imperceptible, and she had suppression of urine. After the transfusion of 600 c. c. of blood, the pressure was 140, pulse strong, no convulsions followed, she voided in 12 hours, and made an uneventful recovery.

For blood disease and deficiencies, 100 transfusions were given in 50 cases. In hemophilia, transfusion is specific but not lasting. In so-called idiopathic purpura, hemolytic jaundice and Banti's disease, transfusion supplies blood deficiencies, supports the patient and makes splenectomy possible. Eight transfusions were given for purpura and 8 for Banti's disease. Transfusion for hemorrhage of the new-born is life-saving. Usually 1 transfusion is sufficient, and the tendency to bleed does not persist in later years; 8 patients were successfully treated for this condition. Transfusion is of no value in the treatment of idiopathic aplastic anemia and acute leukemia, but in chronic leukemia transfusion combined with x-ray treatment is frequently beneficial; 4 of the 10 transfusions for leukemia were given with satisfactory results along with x-ray treatment in a case of chronic lymphatic leukemia.

Transfusion was recognized as the best available treatment for pernicious anemia until it was discovered that liver had a specific ac-

tion in this disease.¹⁹ From my own experience of 64 transfusions in 30 pernicious anemia cases, I am sure that remissions were stimulated and prolonged in many cases and that the patients as a whole were made more useful and happier citizens for a longer time, with transfusions, than they would have been without them. However, Dr. Minot's²⁰ report last month of 60 patients treated over a period of 3 years showed rather definitely the superior value of liver treatment. Nevertheless, transfusion, used as a supportive measure, particularly in very weak patients, will continue a valuable asset in the treatment of pernicious anemia.

Transfusion in the treatment of sepsis deserves special attention. The principles underlying its use in these conditions is too little understood. The 131 cases transfused for septic conditions were for the most part very difficult ones, many being treated in this way as a last resort. In the septic group, 188 transfusions were given; 39 for peritonitis; 30 for postpartum sepsis; 23 for bacterial endocarditis; 15 for septic conditions associated with diphtheria, measles and scarlet fever; 14 for osteomyelitis, 12 for mastoiditis and sinus thrombosis; 9 for tonsillar and mouth sepsis; 6 for pyemic abscesses; 4 for meningitis; 4 for pneumonia; 3 for erysipelas; 3 for carbuncle; and 26 others for miscellaneous conditions.

Although the mortality rate was high in the peritonitis cases, some surprising successes followed transfusion. Excellent results were obtained in the mastoid and sinus thrombosis cases. One patient recovered after repeated transfusion and an operation for a complicating brain abscess even though streptococcus was cultured from the blood and spinal fluid. Another patient had a stormy time with repeated operations on mastoid and sinuses. The blood cultures were positive for streptococcus viridans but after 3 transfusions he completely recovered. This case showed that Streptococcus viridans septicemia may be overcome if the focus of infection could be removed. On the other hand, only failures can be reported in the treatment of subacute bacterial endocarditis and in some of these cases repeated

transfusion with immunized donors was given. In the group of contagious diseases, 3 of those cured showed positive blood cultures. One case of acute osteomyelitis with staphylococcus septicemia, transfused early, recovered. One of the 3 erysipelas cases had blood stream infection and recovered. A patient suffering of streptococcus bronchopneumonia was apparently saved by repeated transfusions. Tissue sepsis with overwhelming toxic absorption frequently responded well to transfusions when other forms of treatment had failed. Some brilliant results followed transfusion treatment of postpartum sepsis. One patient had been septic for 2 weeks when she entered the hospital. She had 2 or 3 chills a day, temperature 106°, positive blood cultures, and was in a dying state when first transfused. After the second transfusion, the chills stopped; and after the fourth the temperature became normal and she completely recovered. This was one of the first cases of this series and stimulated me as nothing else could have done in advocating frequently repeated transfusions for septicemia.

Lawson²¹ reported the results of 2092 blood cultures taken at Bellevue Hospital, 221 positive, and the average percentage of deaths in relation to the total positive cultures for all organisms was 72.2%. Stetson²², in his report on the therapeutic value of blood transfusion in sepsis, concluded that blood transfusion gave any patient with septicemia at least a 50% chance for recovery. If the plan of treatment of septic cases is based upon the principles of infection and resistance, and transfusions are done early rather than as a last resort, I am sure that their place in the treatment of both septicemia and tissue sepsis will become more generally recognized.

In conclusion, the therapeutic value of blood transfusion is dependent, first upon a serious consideration of every step in technic from the time the patient is grouped and the donor selected until the completion of the operation, and, second, upon an intelligent application of the physiology and pathology of the blood, the mechanism of shock, body metabolism and the principles of infection and immunity.

Finally, I wish to thank Dr. Lewis W.

Brown for his valuable assistance not only in helping with a large number of these transfusions but also in collecting data from case records for this report.

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PERNICIOUS ANEMIA

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According to the published literature, I was apparently the first physician to state publicly the belief that pernicious anemia should be considered and treated as one of the metabolic diseases. About 2½ years ago the Psychiatric Institute sent out circulars to the medical profession of New Jersey and several adjoining states, asking for anemic patients to be treated experimentally on this theory. Favorable average results in 35 cases thus treated were reported to this society and published in the state Journal a year ago. Our attention at

that time was directed chiefly to the use of a salt-free and high calory diet. The published paper mentioned the provisional use of liver feeding, but an immediate decision was missed because the quantities of liver employed were insufficient. Meanwhile, Minot and Murphy, in Boston, did a better piece of work by introducing liver in the optimum quantities, and they thus won deserved credit as the originators of the treatment which has actually revolutionized the prognosis and viewpoint regarding the disease.

There are 3 features which are characteristic of a large class of metabolic disorders. First, the primary etiology is in an infection or intoxication which has damaged certain organs. Second, a further progressive impairment of the damaged organs occurs by reason of functional overstrain, so that the disorder is regarded as an inherently progressive fatal disease. Third, the progressive aggravation and the fatal outcome are prevented when a successful means is found of relieving or assisting the function of the damaged organ. These principles have been familiar for some years with reference to such widespread diseases as diabetes and renal-vascular disorders, and pernicious anemia is now evidently added to the list.

The origin of the anemia in infection or intoxication is hypothetic and vague, but nevertheless plausible. There is the plain analogy with other forms of anemia which are known to arise from various infections and intoxications. There are occasional prominent foci of infection in pernicious cases, and the occasional probable origin from a chronic disease such as syphilis. The origin of the great majority of cases is undetermined. It is conceivable that an acute infection injures the blood forming organs and passes off, leaving its permanent damage behind, the etiology being thus similar to that which accounts for many cases of diabetes and nephritis. A rather strongly supported hypothesis is that the achylia and atrophy of the gastric mucosa, which is an invariable and early feature of all pernicious anemia cases, is the primary condition, and that the lack of gastric juice leads to abnormal intestinal conditions whereby bac-

teria or toxic substances are enabled to attack the blood. A still deeper view of the etiology is found in Hunter's theory that infections of the teeth and upper alimentary tract are the usual primary source. Under these conditions, swallowed bacteria or their toxins may give rise to the gastric atrophy and all the secondary consequences. Infections of the bile passages with streptococci or other organisms may be regarded as probably derived from the intestine or the blood stream, as the benefit of routine removal of the gall-bladder has not been proved. The origin of anemia from the toxins of the Welch bacillus in the intestine remains as an unproved speculation, especially as it is hard to understand how the blood can be so rapidly and so lastingly restored by liver feeding if there is a continuous absorption of the primary toxic factor from the bowels. The successful dietotherapy has in fact weakened all theories which attribute the progressive anemia to a persistent toxic cause. Two facts at least seem to stand out as definitely established by practical experience. One is that infections of the teeth, tonsils, and sinuses are present in a strikingly high proportion of pernicious anemia cases, though not in all. The second is that all discoverable infectious foci should be eradicated in order to obtain the best therapeutic results. This rule holds, whether the infections be regarded as primary, or as merely secondary to the anemia and lowered resistance.

The most important feature of diet treatment, as already mentioned, is the feeding of liver, the quantity of which should range from $\frac{1}{2}$ lb. to 1 lb. per day. The successful administration of such quantities without creating repugnance amounting to actual nausea is generally a problem for a skilled dietitian. For this reason, an initial period of several weeks of institutional care is advisable when possible. According to the work of Whipple, Minot, and collaborators, mammalian liver is ranked highest in value, fowl liver lower. Other viscera, such as kidneys and sweetbreads, come next, and red meat, such as beefsteak, still lower; also this group though possessing auxiliary value, cannot take the place of liver. Cooking does not destroy the

value of liver, and the widest variety of cooking methods is desirable to prevent monotony. In some cases considerable use has been made of raw liver, disguised in salad or fruit. Only the repugnance to liver itself needs to be overcome, because the loss of appetite which was formerly one of the serious difficulties in anemia treatment is rapidly obviated under this therapy. We have not had cases, such as described in Boston, in which no food could be given except by stomach tube. But the rapid improvement of appetite and digestion, beginning usually within the first few days, furnishes the means of restoring the patient to normal nutrition. Carbohydrates and fats need not be especially favored or avoided, enough of all foods being used to supply liberal calories. We have never made any regular use of hydrochloric acid, and in the cases where it has been tried temporarily it has given no perceptible benefit and has usually been discontinued at the patient's request. Minot and his collaborators have undertaken the obvious task of fractionating the liver in order to purify the active component as far as possible, and they have succeeded according to their latest announcement in concentrating the potency of a whole day's ration of liver into a few grams of dry powder. The time, therefore, is probably not far distant when the arduous diet of large amounts of liver may be replaced by a relatively small dosage of a specific medicinal substance.

As mentioned in our first publication, we have regularly avoided the use of transfusions, arsenic, and all the old-time therapeutic measures, except for a few emergencies. In rare instances, for example, a patient who is practically dying may be revived by a transfusion sufficiently to make a start with the liver diet.

The results of the diet treatment are among the most prompt and powerful that can be observed with any remedy for any disease. Within a week there is an improvement in the blood count. The bile pigments in the blood and tissues disappear, so that the typical lemon-yellow complexion is lost, and the face soon has no more appearance of anemia. At the same time all the clinical symptoms, except the nerve degenerations, show rapid improve-

ment and soon disappear. Apparently there is no case too severe to respond in this manner. In the most extreme case of our series the red cells numbered only 570,000 and the white cells 2750; the hemoglobin was 18%, and the color index 1.8. This patient improved rapidly without transfusion or any other artificial aid. In another case, the red counts in the first few days ranged from 860,000 to 990,000, the white counts from 2200 to 3200, the hemoglobin from 24 to 28%, while the color index was 1.3. This rapid and uninterrupted improvement is also obtained in the cases of longest duration, in those which have been through any number of former remissions and relapses, and in those which have the signs of an aplastic or non-reactive condition. To some extent the severity of the case is reflected in the final result. The mild or moderate cases often regain a red cell count of 5,000,000 or over, while the most severe cases usually attain about 4,000,000 cells and hold this level as long as the diet is continued. Though many of the qualitative characteristics of the blood picture clear up with the general improvement, there is a persistence, especially in the more severe cases, of the megalocytosis and certain other peculiarities which still suffice for the microscopic diagnosis of pernicious anemia. Furthermore, the tendency to relapse remains present, and though the patients appear to remain well indefinitely while continuing the diet, they will relapse and die in typical manner if they abandon the diet.

The nerve lesions have been mentioned as constituting an exception to the general rapid improvement. The milder stages of nerve degeneration, represented by symptoms of slight tingling, paresthesia and muscular weakness, will sometimes clear up wholly or partially, but the changes are slow, ordinarily extending over weeks and months. The more severe stages do not clear up; a complete paralysis, for example, remains permanently. Furthermore, when the paralysis is very extensive there remains the danger that the patient may die of his nerve lesions even though the blood count continues high.

The favorable response to liver diet is

characteristic only of pernicious anemia and some of the simple nutritional anemias. The liver diet may properly be tried in any form of anemia, but the response is apt to be poor in non-pernicious cases, especially where an active infectious or toxic process exists. Thus, with chronic osteomyelitis, or with an endocarditis in which the infection lights up from time to time, the anemia may persist or become worse in spite of diet. The same is true of other secondary anemias, such as that accompanying cancer, though a temporary improvement is obtained in some cases. Likewise primary anemia of the so-called hemolytic form does not react as well as the pernicious type. With our combined form of diet we generally obtain improvement in the blood count and clinical condition, but the patients are apt to die after a year or two, frequently from nerve lesions which progress even though the blood count remains high. We have also tried this diet in 1 case of advanced lymphatic leukemia and in 1 case of pseudo-leukemia, with marked temporary benefit but subsequent relapse.

There is no doubt that excellent results are obtained in pernicious anemia with the liver diet alone, regardless of other measures. It may then be asked why we continue to forbid salt in our anemia cases.

In the first place, we observed distinct and positive benefits in the majority of such cases on salt-free diet before we ever used liver, and it seems reasonable to employ every means that affords any possible help. Especially in the non-pernicious cases, we have the impression that the diet with exclusion of salt gives better results than are obtained with only the liver feeding. In the third place, there are a few case histories which furnish almost an experimental proof that salt plays some part in at least some forms of anemia.

Female, married, age 62 years, admitted August 5, 1925. History: Negative except for left oöphorectomy 25 years ago. Two healthy grown children. Patient has lived quietly under seemingly ideal conditions, having city and country homes and all the advantages afforded by wealth. Enjoyed good health until 10 years ago, when progressive weakness led to diagnosis of severe anemia. Treatment with iron and arsenic brought the strength and the blood count up to normal. Relapses occurred every year or so, but most of

the time she maintained fair health under nearly continuous medication. Her regular physicians and consultants, and the staffs of institutions in which she was treated never found evidence of hemorrhage, infection, or any other discoverable cause for the anemia. In the past few months she has had pallor, constipation, poor appetite, occasional vomiting of frothy mucus, and increasing weakness. Within the past month slightly sore tongue for the first time. No nerve symptoms. Three weeks ago she fainted at an evening entertainment, was taken home in severe collapse, and she and her family thought she was dying. Blood counts showed red cells 2,400,000, hemoglobin 30%, leukocytes 4500, polymorphonuclears 51%, lymphocytes 35%, large mononuclears 13%, eosinophiles 1%, basophiles 0. The red cells showed pallor, frequent polychromasia, some anisocytosis and poikilocytosis with microcytes predominating. One normoblast was reported. Leukocytes appeared normal. Platelets were numerous.

Under intensive iron and arsenic medication up to the time of admission the red count rose as high as 3,200,000, but the patient remained pale, weak and subject to faintness and dizziness, on moving about. She had never received a transfusion, and their feeling against this measure as a last resort largely influenced the physician and family to send her to the Psychiatric Institute.

The patient was a well nourished woman, height 5 ft. 2 in., weight 134 lbs. She appeared well except for pallor and evident weakness. Tongue slightly inflamed, especially at tip. Systolic murmur over mitral area. Examination otherwise negative. No pigmentation. Muscular power good, sensations and reflexes normal. Urine, blood chemistry and renal function test strictly normal. No perceptible edema. Blood pressure 110/60.

Iron was continued in the form of Bland's pills t. i. d. Arsenic or other hematinics were not used. The essential treatment was merely a salt-free diet, as liberal as the patient could be induced to take, but containing no liver and probably no more protein than had previously been eaten. There was no evident salt retention, the chloride excretion (reckoned as sodium chloride) being 2.7 gm. for the first 24 hours and immediately falling to 0.5 gm. or less for all the following days. Nevertheless, retained water was evidently eliminated, for between August 4 and 20 the weight fell from 134 to 127 lb., and remained at the latter figure until discharged. Meantime the patient was gaining rapidly in strength and color. On August 14 the red cell count was found to be 5,730,000, Hb. 55%, color index 0.5, leukocytes 5000, differential and microscopic findings essentially unchanged. Aug. 21 the red cells were 5,950,000, Hb. 70%, color index 0.8, leukocytes 5500. Aug. 28, the red count was 6,820,000, Hb. 70%, color index 0.8, leukocytes 5500. Aug. 30, the red count was 8,820,000, Hb. 85%, C. I. 0.8, leukocytes, 6500. Sept. 4, the red cells were 7,500,000, Hb. 100%, C. I. 0.7, leukocytes 5000. The patient was discharged Sept. 6, feeling and looking entirely well and with strength better than for many years.

At home she continued the salt-free diet, as demonstrated by occasional urinalyses. Oct. 17, the red cells were 5,300,000, Hb. 90%, C. I. 0.9, leukocytes 8000, with polymorphonuclears 57%, lymphocytes 34%, large mononuclears 6%, eosinophiles 3%. The appearance of the red cells had gradually become by this time completely normal. The patient felt as well and strong as ever in her life. Jan. 5, 1926, the red cells were 4,640,000,

Hb. 95%, C. I. 1.0, leukocytes 7000, differential and microscopic essentially the same. The patient still felt entirely well. The urine contained above 1 gm. of salt, and the patient was warned against laxity in diet. May 15, a 24 hour sample contained 2.4 gm. chloride. May 26, 1926, the red cells were 4,020,000, Hb. 80%, C. I. 1.0, leukocytes 4600, blood picture unchanged. The urine still contained 1.4 gm. sodium chloride. The patient was again warned, though feeling well. August 28, 1926, another alarming collapse occurred; there was first vomiting and then complete unconsciousness for an hour. The family physician obtained the following report from a local laboratory. Red cells 2,410,000, Hb. 48%, leukocytes 8700, polymorphonuclears 70%, lymphocytes 20%, mononuclears 5%, transitional 3%, eosinophiles 1%, basophiles 1%. Marked lack of hemoglobin in red cells, much variation in size, shape and color, a few cells with finely granular stippling; no nucleated cells seen. The white cells showed slight vacuolar degeneration. No myelocytes. The blood chemistry was normal (sugar 94, urea 18, uric acid 3.6, creatinin 1.1 mg.%). The urine was likewise normal, but contained 5.24 gm. NaCl.

The patient admitted that in the preceding few months she had abandoned all diet restrictions because of feeling so well. After the collapse she felt too weak to be moved to the Institute, but immediately resumed strict salt-free diet at home. She improved rapidly without any other treatment, and on September 7 came to the Institute in a fair state of strength for her second admission. The body weight was 139 lbs. and remained unchanged. The chloride output was not above 0.4 gm. per day. Accordingly, if any retention of salt or water had occurred this time, it had cleared up during the salt-free treatment at home. The red cells were found to have risen to 3,004,000, with Hb. 58% and C. I. 0.9. The white cells were only 2800. The morphology was essentially as described by her laboratory.

No medication was used except Bland's pills for one week, after which they were discontinued with a view of observing whether the iron made any difference as compared with the periods before and after. September 18, the red cells were 4,070,000, Hb. 70%, C. I. 0.9, leukocytes 4000, the general blood picture nearer to normal. September 26, the red cells were 4,760,000, Hb. 80%, C. I. 0.85, leukocytes 4460. The morphology appeared entirely normal. October 3 and 12, practically identical blood counts were obtained. Red cells 5,100,000-5,200,000, Hb. 90-95%, C. I. 0.9, leukocytes 5400-5500, no pathologic forms.

The patient returned home October 12, entirely well subjectively. At the end liver was added to her diet, and she has continued to use it up to the present, with no apparent difference in result as compared with salt-free diet alone. November 26, 1926, the red cells were 5,100,000, Hb. 94%, C. I. 0.9, leukocytes 4800, blood picture normal. March 27, 1927, the red cells were 4,850,000, Hb. 90%, C. I. 0.9, leukocytes 4500, with 56% polymorphonuclears, 42% lymphocytes, 2% mononuclears, and normal morphology. The 24-hour urine contained 4 gm. NaCl, but this was due to a brief unintentional irregularity in diet which was immediately corrected. The patient has since remained in excellent condition in all respects.

This case is evidently a nonpernicious type of anemia, as indicated by microcytosis, low color index and other features. The response to salt-free diet is demonstrated with unusual plainness.

as if by intentional experimentation, first through the improvement under diet when medication failed, second through relapse after breaking diet, and third through improvement again under salt exclusion at home.

We do not know whether the salt exclusion is beneficial by reducing edema and hydremia and thus improving circulation, or whether there is some specific relation of the salt balance of the body to blood cell formation and preservation. Our position is weakened by the lack of a theoretic explanation of the clinical observations. There may possibly be some connecting link through the anemia which accompanies the severe forms of nephritis, and which is benefited by salt restriction more than by any other therapeutic measure.

In brief summary, we have now added 18 more to the 35 cases of anemia previously published. The results have been excellent with the few exceptions mentioned, and especially in the pernicious cases does the benefit amount to a practical cure as long as the patient continues the prescribed diet. It can be said that the last 2 years have witnessed a revolution in the entire prognosis and viewpoint of pernicious anemia, and this disease has been added to the list which have been brought under definite therapeutic mastery. It is also a satisfaction to metabolic workers to know that this transformation occurred when pernicious anemia was brought into the group of metabolic disorders.

DISCUSSION

Dr. Henry A. Cotton (Trenton): I cannot let this opportunity to go by without saying a word.

I have been much interested in Dr. Allen's work, because we have had some little experience with anemias, and especially in nervous conditions with anemias, and I am inclined to think that some persistent nerve lesions are due to persistent lesions of the gastro-intestinal tract.

The diet treatment is remarkable, there is no question about that, but it doesn't always clear up the intestinal toxemia or the intestinal condition; consequently, you have a persistence of the nerve lesions which in all probability are the result of a continued persistent toxemia in the intestinal tract. I have had several cases of pernicious anemia which were so diagnosed in New York, had come to me personally, and aside from impacted molars, perhaps, which didn't increase the blood count or make any particular change, x-ray examination showed that there was a delay, although the patient denied any constipation or intestinal symptoms. For 2 months every other day irrigations did have a very marked influence on the count. The patient rapidly recovered and was entirely well in a short time. So I think in this study if we

will pay a little more attention to the intestinal tract as a source of toxemia we will get better results. The x-ray is the only method in which you can determine whether or not you are dealing with an intestinal toxemia.

It is very interesting that Dr. Allen mentioned Hunter. William Hunter, away back in 1900, was the man who first discussed chronic infections in the teeth. I had the pleasure of meeting him in 1923. I have his works on pernicious anemia, severe anemias, which were published about 1910, and I think Dr. Allen (I heard his talk in Morristown a few months ago) is the first man I have heard mention Hunter's work in regard to the relation of pernicious anemia to infected teeth.

Dr. G. T. Spencer (Elizabeth): I should like to ask Dr. Allen about the use of liver extract, which is now on the market, for the control of high blood pressure; if it has been used at all in pernicious anemia?

Dr. Frederick M. Allen (Morristown): I think the form of liver extract used for high blood pressure is entirely different from the active material that they get out for us in anemia. They have no relation.

OPERATIVE TREATMENT OF DUODENAL ULCER

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Duodenal ulcer has in recent years given rise to more discussion than any other disease of the upper abdomen. The question of the relative efficiency of medical and surgical treatment has been presented in medical meetings and in the literature until it has at last assumed a fairly definite place in the minds of medical practitioners, only to give place to a surgical controversy over the many operations suggested for its cure.

Perhaps the vivid recollection of some unusual experience in a small series of cases may, in a measure, account for the lack of unanimity of opinion, and has prompted me to survey in a brief way some of the readily accessible literature so that by presenting numerous series of cases the experience of many may be considered in arriving at a just opinion of relative values.

Of the large number of operations that have been suggested for the cure of duodenal ulcer,

a few have stood the test of time and the harrowing criticism of follow-up statistics, and are justly worthy of serious consideration when the subject of the operative treatment of duodenal ulcer is to be considered. These are: Excision; pyloroplasty; gastro-enterostomy; partial gastrectomy.

Physiology comes before pathology, and perhaps it might be helpful to review for a moment the essential functions of the stomach, to consider how they are altered by pathology and how surgery brings about a return to normal function or a condition which is more satisfactory than that caused by disease. The work of the stomach is logically divided into a consideration of its motor and secretory functions. The food passing from the esophagus collects chiefly in the cardiac pouch and fundus where salivary digestion continues until complete mixture with the acid gastric juice terminates its action. This is brought about by peristaltic contractions beginning about the middle of the stomach and proceeding by definite cycles to the pylorus, mixing the food with the gastric secretions elaborated by glands located chiefly in the pyloric portion, after which a part of it is expelled into the duodenum and the remainder regurgitated in an axial stream to be further mixed and carried onward till it all eventually escapes into the duodenum.

The presence of an ulcer in the duodenum alters both of these functions; the motor activity being changed by the occurrence of hypertonus of the gastric musculature together with hypermotility and hyperperistalsis, which have been shown by the experimental work of Carlston, Ginsberg, Tumpowsky, Hamburger and Hardt, using kymographic records, to be the main factors in the causation of pain, altering our previously accepted view that it was due to the secretory change, namely, hyperacidity.

EXCISION

In this operation it might be considered that the happy solution of our problem had been found for the lesion is removed at once and the cause of all symptoms taken away, which should favor an early return to normal gastric physiology. Unfortunately, application of the

excision operation is limited because of technical difficulties, as it cannot be performed unless the duodenum is easily mobilized, and unless it does not result in an abnormal narrowing of its lumen. Close proximity of the ulcer to the common duct or the pancreatic duct of course precludes its use.

Its greatest advantage lies in the fact that in addition to removing the apparent offending pathology it permits inspection of the interior of the duodenum for diagnosis of multiple ulcers, which are much more common than is generally believed; then, too, in bleeding ulcers it checks the hemorrhage at once, removing a somewhat serious menace, although it would not justify its use in the face of technical difficulties, for the recurrence of hemorrhage after gastro-enterostomy is recorded in only 12%, and such figures do not justify a greater risk.

From the standpoint of reduction of acidity, a mooted question, closely bound up with the subject of the advisable operation, excision alone appears at a disadvantage, for it does not readily lower the hyperacidity nor does it maintain a low level, hence its performance in the face of a high acidity is not recommended.

Several series of cases have been reported in the literature, the largest being the Mayo clinic series of 141, with 1 death from post-operative pneumonia. They have noted satisfactory postoperative convalescence, easier than that following gastro-enterostomy. These results were recorded in spite of a final acidity that was higher than that following other operative measures. Finisterer reports a series of 35 cases, with satisfactory end-results, and Nowak, working in von Eiselberg's clinic, reports 47 cases and advocates a wider application of the operation than is ordinarily recommended.

PYLOROPLASTY

The originators of any surgical procedure are, as a rule, its most earnest advocates, and this is especially true when one reviews the literature with reference to the value of pyloroplasty.

This group of operations under this general title differ somewhat in the method by which

they bring about a somewhat similar result. Enlargement of the pyloric opening, with division of the sphincter, removes the pylorospasm accompanying ulcer, shortens the emptying time of the stomach, which in some cases may show retention long above the usual period, and decreases hypertonus and excessive muscular activity. The original operation of the group, the Heinecke-Miculicz, was first discovered for marked pyloric stenosis with gastric retention, and consisted of a division of the pyloric muscle by an incision from the duodenum across it into the stomach, the resultant wound being sutured in the opposite direction. The distinct danger of placing the sutures in scar tissue and the possibility of contraction of the new opening because it extended through inflammatory tissue soon gave rise to its modification. The operation devised by Horstley is most similar to the original one; an incision across the pyloric sphincter for one inch into the duodenum, and 2 in. into the stomach, with excision of the ulcer if possible, and suture of the opening at right angles, extreme care being taken that the sutures do not go through the mucous membrane of the stomach. Finney unites the duodenum to the pyloric end of the stomach after making a horseshoe incision with one limb extending into the duodenum and the other into the stomach. Mayo has modified this to some extent, using a larger flap than the narrow one of Finney, closure being made by suture from above downward, beginning at the division of the pyloric muscle and suturing the duodenum to the stomach.

These operations all have a limited application, depending upon easy mobilization of the duodenum, the presence of an ulcer that is not so large that its excision will leave infiltrated tissues to be united in making the new opening, and the absence of extensive adhesions. In a general way, it may be said that the less the local pathology the greater the indication for operation. The advantages of pyloroplasty lie in the ability to excise the ulcer, that the altered physiology corresponds more nearly to the normal, and that it does not empty acids into a part of the bowel unaccustomed to receive them.

The end-results in the hands of Finney and Horstley have been satisfactory, the former reports 88.6% complete cures, while the latter reports 66 cases with 2 deaths, these having occurred in the first 12 cases; 54 have been followed for quite a long time, 32 being reported as completely cured, 12 as markedly improved, and 5 required a second operation. Erdman has recently reported 50 cases operated on by the Horstley method, and states that he is increasing the number of cases in which he believes it is indicated.

GASTRO-ENTEROSTOMY

Balfour says of gastro-enterostomy that "it has proved of such value that no other operation or treatment for ulcer of the duodenum compares with it in general usefulness; and it is doubtful if any other treatment for any surgical condition has in the aggregate afforded so great a relief from symptoms". Such an opinion after a consideration of the results obtained in 5755 cases of duodenal ulcer that have been submitted to this operation commands serious and careful consideration when the subject is brought up for discussion.

The relief from symptoms the physiology of whose causation has already been discussed is brought about by changes both in motor and secretory-gastric functions, the flow of food is partially side-tracked, (I say partially because in the absence of an operation for exclusion of the pylorus which surgeons consider needless and unnecessary, some of the food still passes through the pylorus), the regurgitation of bile and pancreatic juice through the newly formed stomach materially reduces the hyperacidity of the gastric contents, pylorospasm is relieved, and the ulcer is now bathed in an alkaline or low acid chyme which promotes its healing. The antagonists of this operation partially dispute this interpretation of altered physiology and a consideration of their theories will be discussed later.

The technic of its performance has been so frequently demonstrated that it has been adopted by many surgeons, indeed as Moynihan expresses it, "Its very success has been

against it." The reports of series of cases in which it has been used are quite numerous and a few of these will be presented for consideration with an analysis of successes and failures, and the probable reason for them. It is quite natural that some of the latter should be seized upon by its antagonists, but this widely used method of cure can ably present the defensive side of a consideration of the utility of this surgical operation for duodenal ulcer.

The percentage of satisfactory results in the various statistics quite closely approach one another: Balfour analyzed 1000 cases 10 years or more after operation, and found that 88% of the patients had satisfactory results; Sheerin, of London, recently reported 500 cases, 92.5% of which were well 2 years or more after operation, and he believes that if any of the causes of failure do not appear within that period, they will not appear later; Moynihan, of Leeds, reports 90% cures; Deaver, 80% entirely well, and 10% markedly benefited; Scudder, 93.6% cured in 94 cases; Walton, 114 cases, 85% cured, 10% improved; Douglas, 114 cases, 90% cured, 5% improved; Pool, 59 cases, 84% cured; Woolsey, 60 cases, followed from 2 to 3½ years, with 88.3% cured; and Lewisohn, of Mt. Sinai Hospital, 68 cases, followed from 4 to 9 years, with only 47% cures; this last series will be discussed later.

Any operation that has been so widely applied by surgeons of varying technical ability, in which the combined statistics show nearly 90% of satisfactory results and 5 to 10% partial cures or failures has fixed for itself a rather firmly established place in surgical therapy. But, as our aim is constantly to strive for perfection, we still analyze the probable reasons for partial success or failure which may be enumerated as follows: (1) Improper selection of cases. (2) Imperfect or defective operation. (3) Technical errors. (4) Recurrent ulcers, especially gastrojejunal ulcer. (5) Failure to reduce hyperacidity. (6) Hemorrhage. (7) Perforation. (8) Incomplete elimination of focal infection. (9) The young patient.

In the early days of gastro-enterostomy, its success led to its use in cases where no ulcer was present, and some of the early and even late failures were due to its use in cases of visceroptosis, gastric atony, etc., in which no ulcer could be demonstrated. It is absolutely essential that a clearly visible ulcer be present before such an operation should be performed. This brings up the question of ulcer on the posterior wall of the duodenum, obviously invisible and sometimes quite difficult to palpate, with a positive x-ray diagnosis (which is not always absolutely reliable), and some consider that it is justifiable to open the duodenum to inspect the posterior wall. Exploratory incisions into the stomach do not involve great risk, but opening the duodenum is fraught with great danger.

The operation itself may be technically incorrect, the stoma must be placed in the most dependent portion of the stomach and must be large enough so that subsequent contraction may not cause a return of the conditions under which the ulcer was formed and reactivate the old ulcer or cause a new one. The jejunal loop must not be too short, for gastric contractions may cause a kinking or twisting at the anastomosis and the segment of the stomach that surrounds the anastomosis should be properly funneled by suturing the mesocolon snugly to the back of the stomach before opening it, and in front when the stoma is completed.

A great deal has been written about the use of clamps during the operation, for some contend that bruising the gastric mucosa gives rise to a new ulcer, a fact which has some experimental confirmation. Linen sutures have been demonstrated to be entirely unnecessary. Both of these technical points have been advanced to explain the occurrence of gastro-jejunal ulcer, the most undesirable and feared of the late sequels. Recurrent ulcers account for a varying percentage of the recorded failures, 32 in Balfour's series, (3.5%) of which 22 were in the stoma, 7 in the duodenum and 3 in the stomach; Konnecke and Junge had 4% of gastrojejunal ulcers in 520 cases; Woolsey 1 in 60 cases; and Lewisohn in 34% of his series. The combined American sta-

istics show 1 to 3% of gastrojejunal ulcers and the German statistics 5%.

The amount of reduction in acidity, and hyperacidity is almost a constant accompaniment of duodenal ulcer, is closely connected with the question of cure; failure to reduce the acidity and maintain the reduction is believed to be a leading cause of recurrent ulcer. Sheerin reports 37 out of 285 cases, followed by postoperative test meals that show no reduction of acidity and most of these cases were not cured and a high percentage of them had to be subjected to reoperation.

Recurrence of hemorrhage following operation in cases in which it had been a symptom previously is recorded by Balfour in only 5% and although small is a logical reason for local or cautery excision if in the opinion of the surgeon such an accident is liable to occur. Hemorrhage immediately after operation is due to faulty operative technic.

Perforation can be almost eliminated from consideration since it has never followed operation in the Mayo clinic series, although Moy-nihan reports 1 case.

In the past, failure to eliminate foci of infection within the abdomen probably accounts for a certain percentage of failures. Pool speaks of a high percentage of incomplete cures in his first 45 cases in which the appendix was not removed, and the frequent occurrence of cholecystitis with ulcer has been almost a universal observation. Sheerin records that in 1 of 37 cases in which the acidity was not reduced, he had made an operative note of adhesions in the region of the gall-bladder.

It is generally conceded that with marked obstruction, high acidity and long duration of symptoms a cure is more certain to occur, and that the small ulcer without marked hyperacidity in a young individual with faulty habits gives a result that is to say the least uncertain. Lahey in an outline of the work in his clinic emphasizes the fact that such patients do remarkably well under medical management, and should be given the benefit of such treatment before considering surgery.

The mortality from gastro-enterostomy has been markedly low, less than 2% in the Mayo clinic, and from 2 to 5% in the leading Amer-

ican clinics, depending on whether cases of perforation or severe hemorrhage were included in making up the primary mortality. The leading foreign clinics, too, show an immediate mortality that is remarkable for its parallel; Haberer, 5% ; Friedman, 2.6% ; Finisterer, 3.6%.

GASTRECTOMY

The unrelieved case, the patient still sick after pinning his hopes on a surgical operation, has focused our attention upon the possibilities of certain cure and brought us to a consideration of radical measures as a means to achieve our aims. Certain European surgeons, notably Finisterer and von Haberer, and a few of the prominent American surgeons, especially Berg and his associates, have of late been outspoken in favor of partial gastrectomy as the operation of choice in duodenal ulcer.

Removal of the pyloric portion of the stomach eliminates at once the secretory abnormality accompanying ulcer, namely hyperacidity, and the pylorospasm or pyloric obstruction, if present, as well as the increased motor activity, but the burden of digestion normally so advantageously begun in the stomach is now shifted to the pancreatic ferments in the intestine. Lewisohn, in Berg's clinic, in an analysis of the cases treated by gastro-enterostomy, found an unusually low percentage of cures, (47%) with a remarkably high incidence (37%) of recurring ulcer, especially gastrojejunal. Postoperative gastric analyses in his series failed to show the usual reduction of acidity, and the persistent hyperchlorhydria has been advanced as the causative factor for the unusual results; although Eusterman, at Rochester, has noticed a relative frequency of recurring ulcer in Hebrews, and most of the cases in the Mt. Sinai series belong to this race.

The advocates of this operation have stressed the necessity of securing a complete absence of hydrochloric acid as the essential factor in successful treatment and Berg reports 100 cases in which the results have been entirely satisfactory, although Finisterer had 6 cases of recurrent ulcer in spite of a complete anacidity.

The primary mortality has been quite high, even in the hands of its most eager sponsors who are all finished technical surgeons. Berg has had 10% of fatal cases, a mortality which he does not feel is high, because he compares it with the primary mortality after gastro-enterostomy, 3% in his hands, plus the mortality in cases operated on for recurrent ulcer (15%), the number of these being greater in his experience than that of the others. The mortality from foreign clinics has been higher than after gastro-enterostomy, being from 5 to 10%.

The question of the necessity of procuring permanent postoperative anacidity, although it has not been thoroughly investigated, is the main contention of those who see in gastrectomy the dawn of hope for all ulcer patients. True, the failure to permanently lower hyperacidity has been the known cause for certain failures after other operative measures, but it is certainly far from an established fact that an anacidity will bring about certain cures in this type of patient. Perhaps further investigation will evolve some method whereby we may be able to determine clinically the relative possibilities of permanent cure by the different operations, so that primary partial gastrectomy may be the operation of choice in cases in which recurrence of ulcer is at least a possibility.

The success of all operative measures depends in some degree upon 3 other surgical but not essentially operative factors: (1) careful preoperative and postoperative care; (2) elimination of all foci of infection; (3) adequate dietary regulation after operation; and, although the subject under discussion is the operative treatment, I will refer briefly to these, for failure to appreciate the importance of these factors, may render negative good judgment in the selection of the most suitable operation.

Pre-operative care is particularly valuable in cases with recent hemorrhages and a low hemoglobin, with reduced vitality, in which the surgical risk can be materially improved by transfusion and dietary and medicinal measures to improve the patient's strength.

In gastric retention, with or without obstruction, the tone of the musculature of the

stomach is improved by lavage and suitable diet.

Following operation rest for the stomach and intestine with maintenance of body fluids by proctoclysis, hypodermoclysis, or even intravenous administration of saline or glucose; the early diagnosis of gastric retention, and its relief when it occurs, by passage of the stomach tube, and the possibilities of high intestinal obstruction in which early diagnosis by studies of the blood chemistry will avoid serious or fatal consequences.

Bacteria play a large part in the formation of ulcers, and Rosenow has shown that certain strains of streptococci have a selective affinity in their formation; his experimental production of ulcer by organisms isolated from an ulcer in the same species of animals served to fix our attention on the necessity for removing all foci of infection, either before or soon after the operation.

The stomach recently subject to abrupt changes in physiology is surely entitled to care and assistance; to force such an organ to do the same amount of work as a normal stomach invites the development of functional disorders, at least. Lack of appreciation of the necessity of postoperative dietary measures no doubt accounts for certain of the unsatisfactory results following operation, but of late the gastro-enterologist checking surgical failures has pointed out how some may be avoided, and how a smooth convalescence and a more certain final result is assured by aiding the stomach through regulation of the diet for a period of time after convalescence.

CONCLUSIONS

(1) No single operation can effect a cure in all cases of duodenal ulcer.

(2) Excision and pyloroplasty have a limited but definite place in carefully selected cases.

(3) Gastro-enterostomy has been our most valuable operative method of cure, and is certainly entitled to the widest application.

(4) The indications for parital gastrectomy have not as yet been clearly outlined, and the question of procuring a final anacidity to effect a permanent cure, needs further experimental and clinical investigation.

DISCUSSION

Dr. George Blackburne (Newark): I have considered for some time that gastric surgery is just as much a specialty as is gynecology, genito-urinary, chest or brain surgery, and it requires special study, special technic, and a special line of reasoning for its successful performance. The quotation of a line from Deaver is particularly applicable to gastric surgery: "There should not be rivalry but only the most ardent coöperation between the internist and the surgeon, that the best interest of the patient may be served."

It is an established fact, as pointed out by Blackford and others, that only a small percentage of the cases presenting themselves to the clinic with gastric symptoms have any real organic stomach disease. Every man, I feel, who is doing any stomach surgery has at some time in his career performed unnecessary, ill-timed and ill-advised gastro-enterostomies. These cases are not cured, and they constitute a certain proportion of the patients coming to every gastro-intestinal clinic today. I have had the experience of disconnecting some of these cases and expect to unhook some more; some of them my own. I am not now referring to those unfortunate cases of secondary gastrojejunal ulcer. The day is past when we do a gastro-enterostomy on every case of ulcer, and a thorough working up of the case, and a chance at medical and dietary treatment should be tried, always remembering to look for focal infections, as brought out by Dr. McLoughlin. If any one should ask me what I considered in my experience to be the most frequent cause of gastro-intestinal ulcer, I would say, infected teeth. It has been almost uniform to find infected teeth, either present or to have been present in cases of gastro-intestinal ulcer.

The principle of treating a gastric ulcer by local destruction with cautery, plus a gastro-enterostomy; and the healing of a chronic duodenal ulcer by a gastro-enterostomy alone; is now pretty well established and followed by most men, I believe, also in the necessity for surgery in all cases where pregastric adhesions are present, or where chronic pyloric obstruction is evident.

I would just like to say a word regarding gastro-intestinal sutures—the new suture which is now available. It is not so very new, having been in vogue for several years. The catgut or chromic gut suture is cemented, or vulcanized, into the head of the needle, thereby eliminating the eye of the needle and the double thread that we used to have to drag through the needle puncture. I have used these gastro-intestinal sutures with great satisfaction in stomach surgery and by their use the operation can be speeded up and performed in a much neater and more satisfactory manner.

Bleeding into the stomach, following a gastro-enterostomy often occurs, but is seldom mentioned. This can be largely avoided by a more careful selection of the segment of stomach wall, by using the needles just described, by taking shorter stitches, locking the inner row, and by catching up small blood-vessels that may present at the line of suture and avoiding larger vessels that may run parallel to the suture line.

At a recent visit to the Mayo clinic, I was somewhat surprised at the impunity with which they would open and inspect and feel inside of a stomach in looking for secondary ulcers. This is a procedure which the average surgeon seems to shrink from doing, but it can be done, and with safety, in doubtful cases. In these secondary ulcer cases,

showing a persistent high acidity, they do a partial gastrectomy, resecting the pyloric end, and of course establishing or reëstablishing the gastro-enterostomy.

It has been a great privilege to hear Dr. McLoughlin's very masterly summation of this important subject, and I want to compliment him on the thoroughness with which he covered the ground in so limited a space of time.

Dr. G. K. Dickinson (Jersey City): It has been the tendency particularly in the United States to separate the medical profession into surgeons and the physicians. I think that is very detrimental to the best interests of many classes of cases, especially of the gastro-intestinal type. To me, ulcer of the stomach and the duodenum are medico-surgical. I feel that one should endeavor by every means possible to relieve and cure gastro-intestinal conditions by medical, dietetic, and other therapeutic measures, if possible. Many times it is possible. Surgery is always an acknowledgment of inability to produce a cure by any other means, physiologic and ordinary methods of procedure which are without special risk.

The majority of cases of duodenal ulcer, if relieved with the feet elevated and put on a proper diet and treated accordingly, will be immensely relieved, many of them cured, few of them coming to operation. If a person relapses one or more times after such method of treatment, then an operation is demanded, but I believe in assisting nature and not in attacking her.

Dr. McLoughlin's experience in the hospital where he works is very, very large. He ends up by telling us pretty much what I feel myself now, that there is a dieting treatment, there is a provisional treatment, there is a successful treatment which is not surgical, but if you are called to operate, then the method he speaks of, the gastro-enterostomy, is probably the one of choice.

Dr. Frank J. McLoughlin (Jersey City) closing discussion: I was pleased to hear Dr. Dickinson strongly emphasize the fact that medical treatment will cure a great many duodenal ulcers. I think our experience in the last 7 or 8 years has shown us that we were rather too rapid in arriving at a decision to operate on a duodenal ulcer and a great many of the cases that perhaps were not quite satisfactory would have been better had they been treated medically.

In connection with the point of hemorrhage after an operation and the use of special types of sutures, this type that Dr. Blackburne mentioned has been on the market for some time and I have been using them for 4 years. There is one technical point in the performance of a gastro-enterostomy that I should like to mention, since he has gotten down to technical details. In the third row of sutures it is customary to invert and apply the surfaces together by means of a Connel loop on the inside, stitch. When you open the stomach to do an exploration and sew it up you do not attempt to turn the edges in, and in making this third row of sutures we have in the last 3 years everted without turning it in. You can inspect the edge better for bleeding and it decreases the danger of postoperative oozing. Another technical point to prevent postoperative hemorrhage is be sure to ligate separately all the big vessels in the subserous layer of the stomach. If, as you cut in to make the stoma, these bleeders are caught in small clamps and ligated, the danger of postoperative hemorrhage will be very much reduced.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

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New Year's Greeting

Walt P. Conaway, President of the Medical Society of New Jersey

It becomes my very pleasant duty, as Presiding Officer of this Society, to extend to you a few words of greeting at this time.

During the past few months I have accepted invitations from more than half of our county societies to attend their regular meetings. The programs for the most part have been very entertaining, as well as instructive, to all present. I think some of the programs could have been improved by utilizing more local talent, in addition to the out of town speakers. The members as a rule were keenly interested in the programs and it occurred to me that the officers of our parent society should and could be of more help in these societies. Since the scheme of "Graduate Medical Education", as suggested by the state society last year, did not meet with much approval, I think the county societies would be quite willing to undertake a course of private teaching clinics and lectures, if given some assistance. Here is another opportunity for service which we, as officers, should be happy to embrace.

Several of the suggestions made by the state society at the last annual meeting have been accepted by the county societies in general. May I ask for more coöperation in the work of periodic health examinations which project

was so favorably brought to the attention of the county societies last year by our Executive Secretary? The antidiphtheria campaign, which was so ably instituted by my predecessor in conjunction with the health authorities, seems to have been sold to the physicians in general and in none of these societies have I heard anything but encouraging remarks concerning this all-important movement. Let me also ask each of you to assist as far as possible in completing a census of our crippled children by sending the names and addresses of any of these unfortunates to the Crippled Children's Commission, at the State House, Trenton.

Another one of the newer activities of our society which is deserving of more support is the Woman's Auxiliary. Eighteen of our county societies have approved of this good work and there remain 3 to be organized. May I ask the reporters to send in their reports of their society meetings promptly and thereby help our Journal to continue to maintain its present high standard? The very marked improvement in our Journal is a source of much favorable comment and the members throughout the state are most appreciative of the excellent material contained in its pages every month. The December number contained 128 pages, the largest issue ever published.

In wishing you all possible success and happiness for the New Year, may I also ask your hearty coöperation with all the activities of our state society?

SOME DISCOURAGEMENTS IN ORGANIZATION WORK

Of the many discouraging factors with which medical society officials have to deal none is more disheartening than that of a minority group refusing to abide by the decision of the majority, especially when it happens that the action determined upon by the organization was not only by a majority but by a practically unanimous vote. Most of our organizations do a tremendous amount of talking about "coöperation", putting up "a united front", etc., and then, when united action is apparently decided, some branch of the organization decides upon independent action. We have a concrete example in mind at the present moment.

At the Annual Meeting of 1926, the House of Delegates voted, unanimously, to organize a Woman's Auxiliary to the Medical Society of New Jersey. All the counties were represented, there was plenty of opportunity for discussion, no opposition was voiced. The preliminary steps toward organization were later taken through the local medical society of each county. Up to date, 18 of our 21 county societies have specifically endorsed the movement and authorized the formation of such auxiliaries to their medical organizations; auxiliaries have been actually constituted in 16 of these and organization will be effected in the other 2 as soon as meetings can be satisfactorily arranged. In 1 county the request for permission to call a local organization meeting has not yet been acted upon.

Now, we have before us letters from the secretaries of the remaining 2 county societies stating that these component units do not see any necessity for, nor any advantages to be gained from, formation of an auxiliary body and will not authorize such action. What is the result? A monkey wrench thrown into the machinery. We can have, we actually do have, an auxiliary to the state society, but that can never be a complete organization so long as these counties refuse to participate.

The question of the moment is not whether a woman's auxiliary is desirable, or whether

such a body can be a useful adjunct in promoting the general work of the county or state society; the question is—should each component society conform to a decisive action of the parent body, especially when they took part in deciding the question, or at least had every opportunity for such participation? We are ardent believers in "states' rights", and in the application of that principle to county medical societies, but also we believe in "team work" and we fear that the organized profession will not get far with its plans until individuals and group units learn to apply the lesson of "everlasting team work" as depicted by one of Kipling's "Tomnies".

TOPICS OF INTEREST IN RECENT JOURNALS

We scarcely dare hope that many members read the Journal through, regularly, from cover to cover; that would be expecting a great deal of our readers and, indeed, if anyone makes a habit of so doing, he necessarily subjects himself to the reading of considerable matter in which he has little or no interest. The Journal is constructed upon the basis, in part, of supplying something of import to each and every member of the state society, but without expectation that any member will be really interested in every item published. For these reasons it seems pertinent to call attention now and then to Journal features which might profitably be read by all members, lest something very good shall escape the eye of one casually viewing the table of contents or hurriedly scanning the pages of each monthly issue.

The December Journal contained a very fine symposium embracing 5 papers on "Syphilis", and covering that subject from pathology to treatment. As some phase of this disease is seen by every practitioner, whether engaged in general or special practice, and as these papers dealt with manifestations from the skin lesions to remote neurologic effects, every member can find something of interest in their perusal.

In this month's issue we have the symposium on "Intravenous Therapy" which was presented at the last Annual Meeting, and here again one finds a topic of general importance and one upon which each member should wish to be well informed, if only because this form of therapy is being so widely employed.

Then we wonder if you have noticed the extensive reports presented during recent months dealing with problems in the realm of social and economic medicine: State-wide Conference on Abolition of Diphtheria, in the October Journal; Report of the Welfare Committee, in November issue; Tristate Conference on State Control of Private Hospitals, in this number; and to go back a bit, that most excellent study on the "Education of the Public in Medical Matters", as presented by Dr. Frank Hammond in the August Journal, pages 501 to 504. If you have not yet read these several "feature" articles, do so at once; you will be well rewarded for the time and labor so expended.

Last month's Journal contained, as part of the New Jersey Tuberculosis League's Report, a novel suggestion for the demonstration of "Periodic Health Examinations at *County Fairs*"; with the report of a very successful application of this experiment in one of our counties. In the Journal of the A. M. A., November 12, 1927, under State News, we find the following squib from Pennsylvania:

"Physical examinations were introduced this fall at the health exhibit of the Schuylkill County Fair. Newspapers announced this new feature for several days previous to the opening, and many persons came to the fair with the definite purpose of having a health examination. A crowd gathered continuously about the health exhibit and more persons were listed for examination than could be accommodated. A report of the observations and recommendations was given to each person and also went to the family physician. The evident success of this feature probably will insure it a place in the yearly program at the state fair."

Here is a matter worthy of consideration as to its applicability in your county.

The December Journal also "fired the first gun" in the new antidiphtheria campaign, and Health Director Bowen's article on immunization is very instructive.

The supposedly increasing prevalence of "Heart Disease" and the large number of published papers bearing upon various aspects of that question, led us to treat of that subject in our "Observations from the Lighthouse" to be presented in the January and February Journals.

These are just a few of the important readable matters appearing in the Journal to which we think your attention should be specifically directed.

CORRECTION OF TUBERCULOSIS LEAGUE REPORT

We are requested by Mrs. E. G. Shreve, Secretary of the New Jersey Tuberculosis League, to correct a wrongful impression that may have been given by the report of that society's proceedings in the December Journal. Publishing the "transactions" as they came to us from the secretary's office, without specific indication as to what parts of the League's work were performed by different members of the organization, may have seemed to attribute an undue share of credit to Mrs. Shreve. She desires to have it made clear that her report covered all the activities of the League, and especially wishes to state that the greatest credit belongs to the Executive Secretary, Mr. Ernest D. Easton.

We are pleased to make this amend to Mr. Easton, whose work we know deserves honorable mention, though he doubtless would have made no complaint—knowing there is most joy in just doing the work so well.

RADIO PROGRAM

Owing to cessation of business on the part of radio broadcasting station WHAR, an interruption in our educational program was suffered. We are able now to announce resumption of the regular program and to say that through the courtesy of the Atlantic City Municipal Radio management the Medical Society of New Jersey is accorded a regular assignment for Friday evenings at 7.45.

Special Article

OBSERVATIONS UPON TRAVEL AND CLINICS OF THE 1927 TRIP

Inter-State Postgraduate Medical Assembly,
Albert S. Harden, M. D.,
Newark, N. J.

When asked to prepare a paper on the clinics visited last Spring the thought occurred to me that possibly the historic and picturesque features of our trip would be as interesting as the strictly scientific to many of our readers, because we were spending a good deal of time in sight-seeing and were off the beaten track of tourists for a least one-half the 12,000 mile journey.

Our itinerary took us to 7 countries and 15 cities; the countries being England, Scotland, Norway, Sweden, Denmark, Germany and France. Our first stop was London, where on June 1, the session was opened at Dartmouth House, the meeting place of the English Speaking Union, by the Marquis of Reading and Lord Dawson of Penn. A very warm and cordial greeting was extended to us and, in no uncertain terms, the desirability of Anglo-American friendship was stressed as the salvation of civilization. Mr. Franklyn, Secretary of the Union (throughout the British Isles, the medical men are all called Mister), spoke to us concerning this Union and made us all members during our stay in England. He is trying to establish an American Hospital Society in London, similar to the students' A. M. A. in Vienna, so that any one coming to London to take up a special line of postgraduate work may, on registering, without delay be assigned to the desired course. The dues will be about \$2 a year.

During the rest of the morning we listened to some very fine papers by distinguished London physicians and surgeons, the first being by Sir Crisp English on "Gall-Stones". In 4000 autopsies he had found gall-stones in 5.4%. Of those patients over 40 years of age, 20% were male and 80% female, and the majority had given no clinical symptoms. He considers the mere presence of stones no indication for operation. They generally occur poor risks, in patients being good feeders and more or less indolent. Cancer of the gall-bladder, in this series of cases, gave no previous history of stone; therefore it does not seem fair to operate upon gall-stones with the idea that this condition is liable to cause cancer, although Sir English says his ratio in St. George's is 10 in 248 cases. He advises

cholecystectomy, when practical, as the operation of choice.

Mr. Murray Livick gave a most interesting paper, with lantern slides, on the treatment of "infantile paralysis." He uses postural treatment with the assistance of slings, taking the weight off the paralyzed parts, heliotherapy, electricity and massage, and stresses the importance of keeping the patient in bed until free of pain. His results have been most gratifying.

In the afternoon, the party split into sections, each man having his choice of the different hospitals (Middlesex, Charing Cross, Temperance and St. Paul's). Temperance was my choice on account of the surgeon in attendance, Dr. Herbert Patterson—not on account of its name. Dr. Patterson is an operator of the old school and clever in gastric surgery. Contrary to the general technic of today, he does the anterior gastrojejunostomy, using silk sutures throughout, a long distal loop of at least 18 in., with an anastomosis opening in both the stomach and intestine of at least 2 in. and, to be absolutely sure, he measures with a metal ruler. He makes it a rule always to remove the appendix, in the presence of ulcer, burying the stump, because he believes there may be some reflex or focus of infection contained in this organ. His reason for the anterior operation is that, in the event of a recurrent ulcer, it is easier to attack from the front than from the rear. He does not remove the ulcer. His next operation was for "breast cancer" in which he did a simple excision saying that in 6 weeks he would do a complete dissection of the breast. His reason for this was that in a complete removal of breast and glands the first line of defence goes with those glands. If, on the other hand, he removed the primary growth only, in 6 weeks the glands would probably assimilate the loose cancer cells and chances of further dissemination would be minimized. He has been using this procedure for the past 5 years and intends to publish his statistics in the near future. He intimated that they would be deeply gratifying.

Dr. Turner showed a clever operation for "undescended testicle" for those over 6 years of age. He frees the testicle in canal, cuts the cord high in the canal, brings the testis down in the scrotum and perforates the septum to bring the testicle through into the opposite sac, sewing cord low in canal and closing incision. He has had 50 cases with 43 cures.

The following morning "sightseeing" was in order, with the Tower of London and Westminster Abbey, as our objectives. The "Tower" is well worth a visit and can be seen in a comparatively short space of time. It is here that the Crown Jewels may be seen by

climbing a winding stair to a small room in the center of which is a glass cage surrounded by iron bars. Inside this glass cage repose the Crown Jewels of England; scepters, crowns and swords, all beautifully encrusted with diamonds, rubies, emeralds and other precious stones. Here also, resting on a plush cushion, is the celebrated "Kohinoor" diamond, one of the largest in the world. From here one passes to the "Bloody Tower", which is opposite the "Traitors' Gate", so named because prisoners were brought down the Thames and through here into the tower. The "Bloody Tower" was so called because of the finding, a century ago, of the bodies of two little princes who were killed 2 centuries before that, in order that their uncle Richard might be King. Sir Walter Raleigh was incarcerated here, there being a small walk between the towers named for him. The "White Tower", nearby, has armor and weapons from centuries back, as well as the famous block and the very business like axes used in the performance of removing heads. In this tower was the chapel where prospective knights knelt in prayer through an entire night, probably watched by monks in the gallery to see whether they kept their trust, and it was here that the "Order of the Bath" was originated, we were told, for although baths were uncommon in those days, there was one who presented himself and was in such condition that he was remanded for the very special favor of a bath and fresh raiment. Down in the dungeons far below the surface, prisoners were sped unceremoniously on their way, through a chute at the end of which was a drop of about 10 ft. onto a nice stone floor. St. John's Chapel has its share of gruesome history, for here Henry VI was murdered and here word was given by Richard to kill his nephews. In the "White Tower" is a chapel where most of the decapitated gentry are buried, and in front on a very pretty lawn is a slab showing where Ann Boleyn, Lady Grey and a few more lost their heads. The attendants, dressed in their picturesque costumes and nicknamed "Beef-eaters" are more than cordial and take great pleasure in showing visitors about, as well as filling one with historical data, especially the sordid side. One feels creepy before he leaves, hearing of all the intrigue that played so great a part in those days.

From here we hied to Westminster Abbey to see the memorials to England's great who have passed on. There is much to be seen, but 2 things were impressed on my memory most firmly; one, the famous Stone of Scone, situated under the Coronation Chair, and the other the new Memorial window dedicated to the Medical Men who lost their lives in the

World War, of which there were about 2000. It is a beautiful window situated at the West end of the Abbey. One feels that, after all, our profession is appreciated. The sun shining through the window casts its beams on the grave of the "Unknown Soldier", as if to symbolize "Faithful Unto Death".

That afternoon, we visited the Chelsea Hospital for Women, where we had the good fortune to see Dr. Victor Bunney and his assistants, Stanley Dodd, Bright Bannister and L. C. Rivett, operate. The exaggerated Trendelenberg is used in all abdominal work, with silk as ligatures, as they do not like to be disturbed at night by a hurry call for hemorrhage. There was nothing new in technic except that every vessel was dissected out before being tied. They use a Riverden needle holder, and are able to work quite rapidly with it. Rivett, in doing a "subtotal hysterectomy", showed us a novel way of removing the cervical mucosa, which he thinks is a rather important procedure; after loosening the uterus to the stage where the cervico-uterine juncture is generally cut across, he grasps the uterus and, under tension, makes small and superficial incisions around this portion of the uterus, gradually going deeper and deeper, until the cervical canal comes out intact as the last cervical incision is made. The rest of the technic is the same as our own. Mr. Bannister did a "trachelorraphy" and prolapse of the anterior vaginal wall fixation. The trachelorraphy completed, he made a transverse incision almost to the mouth of the urethra, inserted his blunt scissors, separated the mucosa, pulling on the cervix during this procedure, and made a longitudinal incision, dissecting the mucosa back to the sides of the cervix and excising the redundant mucosa; 3 mattress sutures of catgut were then inserted on the anterior wall of the cervix at the point of transverse incision extending up to the reflexion of the bladder, sort of a plication stitch, and the incision was closed. This operation is only used in young women.

From here we were taken to the Royal College of Surgeons where we were greeted by Sir Arthur Keith, acting as our guide, and were shown this most wonderful Medical Museum and building. The Museum contains the complete collection of Hunter and Lister, including Lister's first manuscripts on "Compound Fractures", also his famous "carbolic pump". His dissection specimens are a wonder to behold; nearly every form of pathologic specimen must be there. In a short talk, Sir Arthur greatly surprised many of us when he stated that in his vast experience in the examination of bones for syphilis he had been unable to find any syphilitic bone lesions re-

corded earlier than the sixteenth century; that, contrary to popular opinion, the lesions found in bones of early Egypt were due to the betel worm. Furthermore, yaws was very often mistaken for lues of the bone. He then showed us a section of the upper gut taken from Napoleon, showing a small crater-like ulcer which he said was one of the lesions of Malta fever and that this disease was the probable cause of his death and not carcinoma of the intestines, as was generally supposed.

In the evening we were royally entertained by Sir and Lady James Barry at the Royal College of Medicine, after which Dr. Kaye, of the National Physics Laboratory, gave a talk on "The X-Ray and Some of its Uses". A few of us skipped out before he had finished as we were eager to visit the famous old tavern, The Cheshire Cheese, in Wine Office Court, off Fleet Street, a place so small and out of the way that only a guide or taxi driver could find it; this wine shop was once visited by Ben Johnson and Shakespeare. It was rebuilt, mind you, in 1667, and was the meeting place of such celebrities as Dr. Samuel Johnson, Oliver Goldsmith, Edwin Burke, and Dickens. Much of the furniture used by these personages is still there. We were taken down beneath the street and shown the old wine cellar containing many, many bottles of extremely old wine. It is a very odd place and well worth a visit.

The following morning we again assembled at Dartmouth House where Mr. C. P. Dunhill spoke on "Toxic Goiter". He said that one of the first symptoms of this disease in England is exophthalmos, which he claims is a late symptom in America. His mortality rate is 3%, and 85% of his auricular fibrillation cases are cured. He is conservative, usually treating cases medically for 6 months before operating, as numerous cases have been cured without operative intervention. If there is an organic breakdown, he relieves this at once. He warns against the use of digitalis in fibrillation, and as a narcotic uses pantopin. He uses Lugol's Solution in small doses, but warns against its long continued use, as the effect is liable to be the opposite of what we desire though he cannot account for this action. In the edema of goiter, he uses novasurol and theosin.

Mr. H. W. Carsons read a paper on "Ulcer of the Lesser Curvature". The cause, while not definitely known is, he believes, a focal infection or an "ulcer habit" which he thinks is hereditary in some families. There are 2 kinds of lesser curvature ulcer; one, the ulcer with a broad base which extends down both surfaces and is rather shallow, the so-called saddle; the other, a narrow, deep ulcer of the

perforating type. Physical examination is very unsatisfactory. The 3 cardinal symptoms are: pain, high up under the xiphoid cartilage, occurring 1 to 2 hours after eating, and relieved by eating; loss of weight, pain being constant when perigastric; and referred pain to the back when the pancreas is involved. Vomiting, of the irritation type, consisting largely of mucus, does occur, but, hematemesis is rare in the lesser curvature ulcers and the appetite is generally good. The chemical test is unreliable, but 90% of the diagnoses should be possible by roentgenography. He differentiates this condition from cancer by the long duration of symptoms in ulcer, compared with the short duration in cancer; also by loss of appetite in cancer cases, while in ulcer cases the appetite is not affected.

One of the most interesting talks was given by Sir St. Clair Thomas on "Tracheotomies and the Wearing of the Tube Over a Long Period". He showed many patients, some of whom had been wearing the tube for 15 years. Several had been operated upon for carcinoma of the trachea. The tube is of the flutter valve type and when in position, phonation is good. He says that the fault with most tracheotomies is that they are done too high. He decries the use of radium in carcinoma of the trachea.

That afternoon, we went to the Prince of Wales Hospital to see Dr. Carsons operate. Much to my surprise, he used a high transverse incision, saying that he had never seen a hernia following such an incision and that further advantages are in the good exposure. This he certainly had. He did a Billroth No. 2 and a cholecystectomy for us, both of which were cleverly performed. He uses silk throughout. On closing his abdominal wound, he used 3 mattress sutures to bring the muscle and fascia together.

The following morning we started for Edinburgh, by private train. The trip was most enjoyable, especially so when we reached the Northumberland mountains. These mountains are so large in every direction that until you are in the valley you do not realize their height. The stone fences running up and down these tremendous hills were a sight to behold, and the heather, gorse and yellow broom gave the hillside a mass of coloring not soon to be forgotten. The party arrived about 5 p. m. and was divided among three hotels. We drew the Caledonian, with a side room facing the "Gardens" (the name the British give to their parks) and the frowning "Castle" which rises some 500 ft. above the town. After dinner we decided upon a stroll down famous "Prince Street", which passes in front of the hotel. It was still very light, for it remains light

until after 10 p. m., and then there is daylight once more about 3 a. m. To the right of Prince Street was the beautiful park, about 50 ft. below the street and over the entire embankment were rhododendrons of every conceivable color, while at the far end, near the monument to Sir Walter Scott, was a clock made of flowers, which, by the way, was running and keeping good time. We then walked down into the park to secure a close-up as well as to hear the band that was performing. About half way to the band stand, we heard a strange sound, and on investigation discovered several "Highlanders" from the garrison tuning up their bagpipes. Willing to try anything once we paid thruppence for a seat and waited. Soon 12 bagpipers, 3 bass and 2 small drummers came marching down the path. The drum major gave the signal and we heard for our first time a bag-pipe band. "Distance lends enchantment" is an applicable quotation. The following day we were taken to the "Scott country" and the "Abbeys" in large charabancs, or sight-seeing cars in our language. It is a beautiful ride of about 50 miles over perfect roads. Our first stop was at Melrose Abbey, where the heart of Robert the Bruce was buried. The abbey is now a mass of ruins with only part of the walls standing, but enough to show how beautiful Gothic architecture can be. From here we drove about 10 miles, part of the time following the River Tweed, and arrived at Dryburgh Abbey. This, too, is in decay but is being restored. The location is very lovely, approached by a path lined with ancient trees, when suddenly, in a beautiful glade, appear the ruins of church and monastery. Some of the old cells are well preserved. The tomb of Scott has been protected by iron gratings. To the side and a little beyond Scott's tomb are several stone slabs inserted into the fast decaying wall, where one reads of a member of a family of Erskine, who died and was buried there, one of a family of 33 children; no race suicide there. From here we again took our way back by auto on the other side of the Tweed and passed Abbotsford, the residence of Sir Walter Scott, now occupied by his descendants, and a beautiful old castle filled with memoirs of Scott, who died a poor man, although at one time he was master of all the ground he could survey in every direction from this delightful spot. From here we made a steady climb for about 4 miles to the top of a hill overlooking the country just passed, which Scott often remarked afforded the most beautiful view in all Scotland. The panorama stretched before our eyes was one long to be remembered, the River Tweed winding its way through the lovely valley and a faint

glimpse of Abbotsford on the bank of the river. Then back to Edinburgh in a rain storm, although it is called, I think, Scotch mist by the natives.

The following morning we visited the clinics at the Royal Infirmary, which contains about 1000 beds. The hospital is both old and new, several additions having been made in the last few years, especially to the women's department. Their report for 1926 shows that 16,154 patients were treated there, 4568 being medical and 11,586 surgical. Of these 1107 died. Outside clinic treated 56,989. On an average, there were 2261 cases awaiting treatment. Truly a wonderful clinic, with such an abundance of material. The mortality of cases in this hospital over 48 hours was 4.6%. All care is free. Donations from the State, from individuals, and memorials, sustain the hospital. Employers' Liability Insurance takes care of the injured workmen.

Sir Haig Ferguson, a fine old gentleman, showed us around the Gynecologic Department and demonstrated removal of a small "ovarian tumor". He believes that all tumors of the ovary should be removed because of the frequency of malignancy. His dressing of abdominal incision is unique, as he uses a mixture of mastic, 4 drams, and benzol, 5 ounces, applied to the skin, then over it one layer of gauze, smoothed out, and on top of this his other dressings of gauze and cotton. The first piece of gauze adheres to the skin and he is able at all times to inspect his wound without removing all of the dressings, and if he has a stitch abscess is able again to remove the offending piece of catgut without disturbing the rest of the dressing.

Dr. Fordyce, his assistant, performed a "Crossen perineorraphy" in a clever manner. Dr. Young, another assistant, performed an operation for "prociptentia" during the child-bearing period. He begins as if he were doing a Watkins, dissecting the mucosa very widely on both sides; in fact, it looked as if he were dissecting the cervix out. He then makes a cuff incision posterior to cervix, dissecting it well up, and follows with a rather high amputation of the cervix. Interrupted sutures are placed around the cervix and when tied resemble a rosette; quite similar to the operation seen in London. From here we went over to Professor D. P. D. Wilkie's clinic; he is possibly the foremost surgeon of Scotland. He is partial to spinal anesthesia, stovain being his choice. Several operations were performed on the stomach and gall-bladder, with nothing new in technic. He stated that enlarged glands around the gall-bladder indicate streptococcic infection and that an early sign of carcinoma of the stomach is an en-

larged gland in the mid-axillary line at about the fourth rib on the right side. He advises partial gastrectomy for gastric ulcer. Drs. R. A. Fleming, W. T. Ritchie, and Chalmers gave "ward rounds." There is a great deal of tuberculosis of the bovine type in Scotland, due, no doubt to lax supervision of cattle and the non-pasteurization of milk; the former is gradually being attended to and the other will no doubt also be supervised. Syphilis is also common; in fact, one of the men informed us that it was very much so in Edinburgh. Quinidin every 4 hours seems to be a popular treatment for fibrillating heart, especially in the acute thyroid cases. It is of no value in the chronic type, however.

Dr. Watson gave a very interesting talk on "Medical Sepsis" which is indicated by chronic nervousness, multiple sclerosis, anemia, migraine and joint infections. He stated that the focus of infection is generally in the gastro-intestinal or genito-urinary tract. In the former, he treats it as follows: Gives a saline; after satisfactory results from this, he washes out the bowel with high enemas of plain water until the water returns clear; then stains the return for bacteria, makes a vaccine and changes the diet completely, giving large doses of hydrochloric acid ($\frac{1}{2}$ to 4 drams) in buttermilk t. i. d., also lactose with kaffir and *Bacillus bulgaricus*; at the same time, he continues the rectal irrigations daily until the return is bacteria free. He claims very good results.

The following day we entrained for Newcastle on Tyne, to embark for Bergen, Norway. On the south side of this famous river, for its entire length, are coal chutes, while on the north side are ship-yards, of which some must be governmental as numerous submarines and larger war-vessels were in dock. The battle-ship, "Hood", Britain's largest, was anchored, preparing for dry-dock. As we passed, we were given a vociferous greeting. I think, however, that the salute was for the boat and not for us, as this was the maiden trip of the "Stella Polaris" to her home port at Bergen. She looked more like a yacht than a passenger steamer. Her equipment and riding qualities were most ideal, and she is an oil burner of about 6500 tons. While we dreaded the idea of sailing on the North Sea, having heard of its bad reputation, much to our relief, the entire trip was like being on a mill-pond. The following afternoon we sighted the coast of Norway, with bleak and precipitous mountains seeming to rise directly from the sea, their tops covered with snow. Rapidly, small habitations came into view, perched upon the sides, making one wonder how man was ever able to build in such

places. Bergen Fjord is one of the smaller fjords dotting Norway's coast, but at that it is 60 miles long. At the end is the picturesque city of Bergen, with a population of 60,000, situated upon several large hills and at the base of a mountain several thousand feet high. As we neared the dock, it seemed as if the entire population was there to greet us. Aërials were exploded, steamer whistles were blown and everywhere flags were flung to the breeze. Again, they were greeting the ship and not the American doctors, although we were of interest to the population as we boarded the private train for our trip to Oslo. We were especially popular with the younger element as several of the members started throwing coins and were having an exciting time until one of their police came along to save the children from sliding under the wheels. These gentry are the same the world over. It was comical to see the grimaces made behind his back by the children.

The trip from here to Oslo is over a railroad that is one of the engineering feats of the world and few, if any, trips are so filled with the wonders of nature as this 200 mile train ride. One minute we were skirting a lake, the next through one of the numerous tunnels (some 40 odd), then over a bridge spanning a raging torrent from the glaciers overhead, (the spray at times flying nearly over the coaches), through another tunnel, and then out into a deep valley with the towering mountains on both sides. There were fjords and more lakes until we made our first stop at Voss. Here another engine was put on in front and a third in back, for we began a climb of over 4000 feet to Finsel, through 25 more tunnels, mostly short ones with the exception of the famous Grasshols, which is 17,421 feet long and required 12 years to build through solid rock. We then climbed upward to Hardanger, a total of 4268 feet. Here is snow the entire year, at times 30 feet deep; really part of a glacier. Suddenly you are going down grade; this continuing until you reach Grefsin, from which you can see Oslo and its fjord. It is possible to see all of this trip even though travel is during the period after 6 p. m., there being only 1 hour of darkness and that between 1 and 2 a. m.

Oslo is at the head of Oslo fjord and was founded in 1047. Many of the old buildings still remain, the most famous being the Akerhus Castle, now a military post and prison and the Old Aker Church of Norman origin. Of late years, 2 Viking ships have been unearthed near Oslo; one, belonging to Queen Aasa, grandmother of one of the Harolds; and the other, which is about 150 ft. long, similar in type to the one in which Eric came to Amer-

ica. They are in a good state of preservation. The Vikings were not as heroic a crowd as we were lead to believe, but were more or less pirates, preying upon their neighbors for food and women. When a chieftain was buried his ship and all his possessions were interred with him and a new chieftain elected. At Oslo University there is a very fine collection of old Viking relics, and the skill displayed in wood and ivory carving is surprising. At Bigdo, the open air park of Oslo, there is a collection of old houses furnished as in the time of the Vikings, and also numerous sacred and profane articles of worship.

The following morning we gathered at the University to listen to words of greeting by Professor Nickolay, Dean of the University, and to several fine speakers who talked of the Norwegian migration and its influences in the U. S. A. From there to the Rijkshospit, which is a modern institution built on the pavilion plan and accommodating about 2000 patients. Professor Bull was kind enough to perform his "extra-pleural thoracotomy" for us. In all, he has performed 146 of these, with an operative mortality of 4.2% and a 39% cure. One-sided involvement from tuberculosis is his indication for operation. He uses the two-stage method, dissecting out in their entirety the lower 7 ribs, and, 2 weeks later, the upper 5. General anesthesia is used. The procedure, as you can well imagine, is quite formidable. His dressings consist of sterile gauze and a tight bandage. Cough is distressing and he gives large doses of morphia for control. We then visited Dr. Carl Brandt, an excellent obstetrician, but a terrible grouch, so we were unable to imbibe any knowledge from this source. We wandered over to the surgical pavilion where we were shown some interesting cases, postoperative. The physicians of Oslo later entertained us at the Royal Norwegian Yacht Club, across the fjord from the city, and we spent a most enjoyable evening.

The next morning we were taken to the Ulleval Sykhouse, a municipal hospital of 2000 beds and quite modern. As Norway is rather socialistic, the physicians here are paid by the government, while the government assumes to a great extent the expenses of running the hospital; yet the people are not pauperized, being required to pay 3 kroner, about 72 cents a day, if living in Oslo, while those living outside the city pay 11 kroner. The buildings are artistically arranged, covering about 990,000 sq. ft. of ground. Hospitalization is good, the proportions being about 14.15 beds per 1000; this including their tuberculosis sanatoriums. We listened to an interesting discourse by Dr. J. Heimbeck on

the occurrence of tuberculosis among the nurses and its prevention through vaccination. It is his contention that 12% of nurses who give a negative von Pirquet reaction develop tuberculosis, while those with a positive reaction seldom, if ever, develop the disease. He, therefore, injects Calamette's tuberculin subcutaneously, it being nonpathogenic. If a reaction occurs he reduces the dose. This treatment is continued over a space of 6 weeks, injecting weekly, at the end of which period he is able to secure a positive reaction. In all the cases so treated, none developed tuberculosis, while of those refusing vaccination, 3 out of 11 developed the disease within a year. His experiments show that about one-half of all nurses have a negative von Pirquet. He considers the reaction as of protective value only, and advises the N. Y. Board of Health Tuberculin (Park) as the best.

On making rounds in the surgical wards, we were shown a very instructive case that had recently been operated upon for "extrophy of the bladder"; a child 7 years old. The following was the technic of this two-stage operation: The cecum and ascending colon were resected, the duodenum being attached to the hepatic flexure, an appendicostomy performed, and the resected cecum was washed out daily with water. At the same time the patient was immunized by his own urine and a colon vaccine. After immunization was accomplished, the second stage was undertaken, consisting of transplanting the trigone into the sac made by the former resection of cecum and colon, which now formed the new bladder. The appendicostomy was used to empty the new bladder by insertion of a catheter several times a day, the patient being educated to perform this act himself. In the case which we saw, the result was perfect.

That afternoon a garden party was tendered us by the American Consul at a very fine residence surrounded by sunken gardens. It is owned by the U. S. A., and, I understand, was bought at a bargain, as it was built by a Russian war millionaire who later met with reverses and was forced to sell.

The following morning we entrained for Stockholm, the "Venice of the North", an all-day train trip from Oslo. Stockholm is built upon 9 islands in the main land of Lake Malar and connected up by numerous bridges under which runs very swift water. It was near one of these bridges, in front of our hotel, that we saw fishermen with large nets fastened to the stern of their row-boats and worked by a hand-power windless for raising and lowering. It seemed as if the fish swam up to this bridge and that the current was so strong they

were unable to go further; then the nets would easily catch them.

Bright and early on the morning following we arrived at the Serafinerlazerrete to be greeted by H. C. Jacobsen, President of the Program Committee. After this formality of greeting, he demonstrated his method of "cauterization of pleural adhesions in artificial pneumothorax". He uses an instrument similar to the cystoscope, to which is attached an electric cautery with a hooked blade, wherewith he is able to see the adhesions while severing them. He prefers this method to the thoracotomy operations in tuberculosis and reports very gratifying results.

From here we were taken to the surgical clinic of Dr. A. Troell, who is considered one of the best of the Swedish surgeons. As this particular hospital is rather ancient, the accommodations for so many of us were inadequate and the operator was greatly hindered because of the crowding of men about the table. His first operation was a "splenectomy for hemolytic jaundice." He has done 20 such operations, with uniformly good results. He uses the Bevan incision and catgut sutures. In the treatment of purpura and pernicious anemia, he has ligated several of the large splenic vessels with fair results. His next case was a "partial gastrectomy" for the recurrence of symptoms of ulcer in a case that had been operated upon 1 year before. In this operation he used silk to ligate the superior and inferior gastric arteries, with an instrument similar to the thyroid needle of Kodse. Before he had finished, over two-thirds of the stomach had been sacrificed. We all considered it very radical surgery. There is no question as to his skill as an operator, however, as the work was beautifully performed. In the afternoon we saw him do a thyroidectomy which was not so cleverly done as was his morning work.

That evening we were the guests of the doctors at Skansen. Here we saw Swedish folk-dancing by a dozen couples, to the accompaniment of a string orchestra. One of the instruments was a wonder to behold, being a cross between a violin and guitar, but it gave results. After visiting the old Scandinavian houses, furnished as they were 200 to 300 years ago, the bugle sounded and we were paraded to the Hogloftet Restaurant in the park, meeting our American Consul to Sweden and several other notables. A sumptuous meal was served by Swedish girls in native dress. By this time we had acquired sufficient knowledge of the Swedish language to be able to say "Skol", which is, "here's to you." Needless to say there was plenty of

"skolling", as their wine was delicious. The President of our organization, being of Swedish descent, spoke the language fluently and many of the Swedish physicians spoke English. Consequently, speeches were given first in one and then the other language, and a good time was had by all. In the assemblage was Dr. Troell, who, beside being a surgeon of note, is also a famous singer. He has a wonderful tenor voice and sang for us several songs that were greatly enjoyed.

The following morning I visited the Women's Hospital with Dr. Zacharias, a physician whom I had met the night before. This hospital is modern. Unfortunately, no work was being done there at the time, so I was only able to see the hospital itself. The nurses come from the higher walks of life, the head nurse being quite a linguist, speaking 6 languages and the majority of the girls having had at least 1 year of college. Everything was immaculately clean throughout the hospital and grounds. From here to the Orthopedic Hospital, meeting Dr. Harry Nielson, a very clever young surgeon. During our short stay here, he demonstrated about a dozen orthopedic cases; flat-foot, pes cavus, infantile paralysis. They have their own shop and make all their own orthopedic appliances. Nielson is a full time man and is certainly a comer. He is a great believer in the "sedimentation test", of Westergren, whom I had the pleasure of meeting later in the day. The test is simple, requiring only a calibrated tube and special rack for holding the tube. The test depends upon the serum-hemoglobin in the blood and the formation of rouleaux; 20% sodium citrate sol. being used in the proportion of 1:2 of blood. The pipet is cleansed with the solution before drawing up the blood, and is then read off at the end of the first hour, after 2 hours and at end of 24 hours. Three to 4 mm. is normal at the end of the first hour and 10 at the end of 24 hours; 20-25 mm. is pathologic. It is valuable in all infections like pneumonia or any other destructive proteid condition. With influenza it is low, unless complicated with pneumonia. In active tuberculosis it is increased, while in syphilitic aortitis it is very high.

On visiting Dr. J. Heyman, I was surprised to hear him state that he was curing 90% of his lip carcinomas; first using electrocoagulation and later 1½ gr. of radium.

That evening there was an excursion through the archipelago of Stockholm to Saltsjobaden and a visit to the sanatorium for the treatment of arthritic cases, by baths and massage, winding up at the Grand Restaurant where we entertained the medicos of Stock-

holm. The trip was delightful and reminded one of the Thousand Island trip, as the archipelago is filled with numerous small islands on which are built some wonderfully fine residences. A two-hour sail on a small steamer brought us to our destination. The Kurehouse is a rather imposing brick building 6 stories high, thoroughly equipped for mechanotherapy and various medicinal baths. It is very pleasantly situated in a park with a profusion of rhododendrons. There is a fine lake on which were some beautiful sail-boats. This is a summer residence for the wealthier classes. After a very fine dinner the tables were cleared and an American jazz orchestra started things going. Again a good time was enjoyed by all.

The following day I tried to see some gynecology, but the 2 cases to be operated upon by Dr. P. Wetterdal both turned out to be malignant ovarian tumors and were opened, only to be closed. In the afternoon we visited the King's summer home, Drottingholm, with its sunken gardens and private theater; then through the suburbs seeing the small truck farms ranging in area from 50 sq. ft. up; then to the Riddarsholm Church, the pantheon of Stockholm, and from there to the City Hall, a massive brick building by Lake Malar with terraced garden extending to the water's edge, and built in the shape of a quadrangle. The court enclosed in the quad extends to the roof, about 200 ft. high and seats about 5000 people. Near the top is a massive organ containing 16,000 pipes, upon which concerts are given at frequent intervals. One of the most beautiful rooms seen through our entire trip was the "gold room", made up entirely of glass mosaic of a yellow hue, truly an awe-inspiring sight. Along the walls are allegoric pictures, also in glass mosaic. This is the banquet hall and seats 750 people. A large tower at the end of the building rises 219 ft. and contains the chimes and allegoric clock of St. George and the Dragon, which clock performs daily at noon.

The following morning we trekked further north to Upsala, the prehistoric pagan capital of Sweden. While not the actual capital now, it is the religious one, being the residence of the Archbishop and the site of a large cathedral containing the grave of Gustave Vasa, the father of Swedish freedom, the silver reliquary of King Eric, Sweden's patron saint, as well as the tomb of Swedenborg, the founder of spiritualism, and of Linne, the botanist. The cathedral, while at the present time Protestant, was begun in the thirteenth century and not completed for several hundred years. It is of Gothic style, rebuilt in brick, after numerous fires, with stone portals. The

university is on a hill not far away. In the library is the famous Codex Argenteus, a translation of the 4 Gospels in Gothic done in the fourth century. It is lettered in gold and silver on purple vellum. There are many other old manuscripts there including Professor Carl Linne's original drawings of the development of plants, both male and female.

Again I was disappointed in gynecology with Professor J. Olow, cancer being our nemesis. The university itself was built in 1477, making it one of the oldest in Europe. Lately a new addition has been erected, bringing it up to modern ideas, and 3000 students attend its lectures. From gynecology, we went over to the surgical department to watch Professor G. Nystrom operate. In the amphitheater, there are projecting machines, movies, automatic blinds for windows, and sky-light. A treat was in store for us: There was an external thorocoplasty only about $\frac{1}{4}$ of the ribs being removed; a resection of the hip joint for ankylosis, with transplantation of the fascia lata as a new covering of the acetabulum, fitting it to the head of the bone with the fat from the graft placed in the socket; a case of osteomyelitis in which gypsum was used, sterilized at 160° C. and mixed with a 1:1000 Ravinol solution. Nystrom stated that this is one of the best antiseptics he has ever tried. Sometimes he is forced to remove this from the bone, but infrequently, as Ravinol is continually working to sterilize. He also uses it in joint infections, as an irrigation, with very good results. He uses local anesthesia frequently, recommending "Svedocain". He is a full time man, paid by the government about \$5000 per year. Sweden being divided into districts, all those in a certain area go to the hospital in that district, where they receive medical care free of charge, paying indirectly in taxes. If Nystrom is called in consultation, he is allowed to charge about \$1.25. He is a very, very clever surgeon and is doing a tremendous amount of work.

To old Upsala in the afternoon; a village with a little granite church, so ancient that it is believed its basic walls were a part of Odin's temple. Near here are 3 very large mounds supposed to be the graves of the pagan gods, Odin, Thor and others. It was here, tradition has it, that each year the pagans came for their worship of the gods. During this period, sacrifices were made of one of each kind of animal they possessed and one human. They were hung on trees. Later the human was cut down and thrown into a deep well that is still there. These mounds are similar to the Indian mounds in this country and are probably monuments to their chieftains who are buried

there, as lately one has been excavated and numerous bones and household utensils were found.

The following morning, at the unearthly hour of 6:30, we entrained for Copenhagen, an all day ride through very fertile country; as one of the party remarked, "a country of contented cows". The grass is wonderfully green and the cows are staked out so that each one has a fixed area to feed on. At Malmo, we took a small boat for a 2 hour sail across the Baltic sea to Copenhagen, with the sea as smooth as glass. This is the place that snuff made famous, but I never saw it in use during my entire stay. We were ensconced at the Palace Hotel across from the City Hall. While it was a good hotel, the City Hall had some chimes (?) that rang every 15 minutes and played a tune (?) every hour so that unless one was able to fall asleep between times that person was out of luck. It is my sincere wish that they tune up before our next visit.

(To be continued.)

Medical Ethics

THE RULING DRIVE "THE HUMAN CONTROL"

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The urges of the emotions must be controlled by the spirit and intellect, otherwise we cease to be intelligent beings. If we use the word, "spirit", in the sense of the Greek word, *psyche* (soul), it is something different from and higher than the intelligence. We believe that the brain is the organ of the intellect; this is subject to proof and we can believe that the brain generates thought as the liver generates bile. We can believe that the intellect influences the spirit, but who can say it generates the spirit, for we look for a higher origin.

Behavior or conduct is controlled, that is regulated and held in check, by the intelligence, the mind, and the spirit or the soul; when control is gone the body is lost, the mind may be lost and the spirit itself in jeopardy.

Not long ago those humans who had lost control and who were confined in Bedlam Hospital, London, were regarded as animals in a menagerie and people paid good money to see them perform. We think we are more

humane today and our insane are housed in palaces of brick and stone.

Restraint is essential. It is a prophylactic and a remedy. The time to begin its use is in childhood. It is an old saying, but a true one, that one's emotions either rule him or he rules them, and thousands of men and women go through life mentally handicapped because they were never taught emotional control during childhood. The reactions are positive. While virtue may not always *demonstrate* its own reward, conversely the penalty for lack of control can be easily demonstrated—and the penalty is often grievous to the flesh and destructive to the spirit.

To some it may be alluring to hope for that freedom we imagine will be ours if we take down the bars. Some are content and imagine a false security if only they are not "caught in the act". To many there is an attraction in forbidden fruit. But, if restraint is left out of our calendar that calendar will be short. We cannot, after all is said, avoid consequences. They are the law, and this law was not made by man.

If there is such a thing as subconscious thought, are there not likewise subconscious acts? When we come to consider subconscious actions over which we have no control are we not getting on to dangerous ground? Yet, Freudian ideas are by many accepted and by some proclaimed. By others they are considered a joke. There has grown up a powerful cult with *psychoanalysis* for its catchword. We all admit there is something in it but it is difficult for some of us to swallow the whole bolus and accept the "Oedipus complex" and also to believe that psychic freedom is an illusion. Neither can we hold that certain instinctive sexual impulses play such a leading rôle in many of our lives as Freud proclaims—our unconscious thoughts dominating our earthly existence. This all may be basis for a theory but an hypothesis is not proof. If we reason from analogous premises, hysteria and hypnotism, are we not likely to fall into error? Even the term—psychic trauma—is rather fantastic.

These things are mentioned because they are often given as an excuse for conduct but we should not let our intellect lose control lest we sail helplessly on an uncharted ocean.

Few will deny that *religion* influences conduct. More than 34% of the inhabitants of this world are Christians; most of the remainder are Moslems, Buddhists, Hindus, Confucians, with about 3% of Hebrews. Few will deny that religion *works!* Whether one is guided by Christ, or Buddha, who appeared some 500 years before Christ, or Mohammed,

who came along 500 years afterwards, the influence of religion on human conduct is seen and felt in a manner that is only short of the miraculous. This, even an Ingersoll, a Tom Paine, or a Voltaire could not deny. Are there any wars more overwhelming than religious wars? What power appeared greater than that Christian religion that saw myriads of martyrs die at the stake and suffer unnamed tortures with a smile and a song? Surely it is not religion but we who are at fault in raising *ecclesiasticism to a confusion of meaning so that ritual scrupulousness often becomes more important than human rectitude.*

To employ a useful but overworked word—human conduct at its best is a “complex” of animal, spiritual, intellectual, religious, and perhaps chemical drives activated by a sound body (inheritance), a suitable habitat (environment), an educated mind (mentality), and a pure heart (religion), giving one his claim to be called a Son of God.

Medical Economics

THE COLLECTION OF FEES

(Reprinted from California and Western Medicine, September, 1927.)

The great majority of physicians must depend upon the fees which they collect to house and clothe themselves and their families, to educate their children, and to put aside a something for the probable stormy day of tomorrow or of advancing years.

In the days of not so very long ago, when the physician was less of a specialist and much more often an intimate part of many family groups, to the members of which he had rendered services to bring out varying expressions of gratitude and material appreciation; and when the exigencies of modern-day living were not quite of so coldblooded a money character as today, it may not have mattered greatly whether a goodly number of patients paid, what were little more than small installments on the worth of professional services rendered.

But today, with the increasing complexity and specialization of trades, businesses and professions, and the newer methods of doing business in both urban and rural communities, the doctor who does not collect a goodly proportion of the fees he has earned, is more than apt to be faced with a column in the red; and

no man can do justice to himself in his profession and give expression to his best work and capacity under such a handicap.

Physicians vary greatly in their financial attitude and relationship to patients. There be some doctors, who smilingly and graciously and seemingly with a minimum of effort, can secure a large proportion of the fees due them from patients. There be others who put their business relationships on the same basis and procedures which are in vogue in the lay business world, and who seem to be successful with that plan. But a goodly number, if not a majority, still send out statements and make their collections on much the same plan as their predecessors, hoping that a sufficient number of patients will send in their checks or make payments to keep the ledger showing no red when the balances for the month or year are computed.

The geographic, social and economic environments of patient groups, the character of general or special medical practice engaged in by the physician, the financial customs of the colleagues of the community, all these are factors to be reckoned with in this matter of collecting fees for services rendered; and last but not least is the individual physician himself, his own likes and dislikes in these matters, and his financial aspirations or needs.

These comments are made because in the Medical Economic column of this issue is printed a series of stickers or follow-up notices which could be enclosed with statements to patients whose remittances for services rendered, are past due. These notices were devised years ago for the members of the Los Angeles County Medical Association. There was a twofold purpose in their creation: (1) to have each notice be a spur to the collection of the money due and yet be not of an antagonistic nature; and (2), to lead up to the point where the account would go to a collector so that such a patient would not be the recipient of future services. These notices are almost self-explanatory and can be modified to suit local conditions or personal preferences. The fact that many members of the profession, especially younger members, are oftentimes in a quandary on how to proceed in such matters made it seem permissible to print and call attention to this system which has borne the test of trial; and which an office secretary can carry out in quite impersonal routine with a minimum of fret and worry to the physician. A system which creates a minimum of antagonism among delinquent patients, but which is as effective in its results as the almost brow-beating methods of some

mercenary collection agencies which proceed in their collections with an abruptness that makes enemies for a physician where friendship and gratitude should exist; and a system which nevertheless eliminates the undesirable patients, may be thought worthy of trial by some of the colleagues who have been in doubt on what procedures to adopt in this important business of fee collection. That is why these slips are printed in this issue. Each physician who reads the method of procedure can determine whether or not there is any part of it which he himself might wish to adopt.

A FOLLOW-UP SYSTEM IN THE COLLECTION OF FEES

The plan comprehends the sending of statements so that by the end of the sixth month, if the delinquent patient has given no indication of desire to pay, either in whole or in part, the account will then automatically be sent to a collecting agency. The collecting agency is told to endeavor to collect the account, so that, in the future, such type of patient will find it unprofitable to bring either himself or the same kind of friends to the office.

FIRST STATEMENT

The first statement is rendered as near after the first of the month succeeding that in which the services were rendered, as is convenient. It follows the usual form of all such statements.

SECOND STATEMENT

This is the ordinary statement, no reminder being enclosed, the statement being sent at the beginning of the second month after the services were rendered.

It may be added that two forms of statements are printed. The first or memorandum statement which is sent out has printed thereon the following:

"Financial accounts, the sending of statements, and so on, are in charge of the office secretary. Statements are issued upon completion of services, and monthly."

After this first statement has been sent, a similar statement is used, except that in addition to the foregoing note the following is printed thereon:

"For your information, in case previous statements went astray in the mails, I would state that this is the..... month we have mailed this statement.

.....,
Secretary."

THIRD STATEMENT

This statement is rendered at the beginning of the third month after the services were rendered. Attached there is a sticker, printed in red, which is as follows:

Our bookkeeper fails to find your account settled on our books. Please help him out.

FOURTH STATEMENT

This statement is rendered at the beginning of the fourth month after the services were rendered. Attached thereto is a sticker, printed in red, which is as follows:

PAST DUE

This account has no doubt escaped your notice. Will you please favor us with a remittance by return mail and oblige?

FIFTH STATEMENT

With the fifth statement goes a red sticker, as follows:

THIS ACCOUNT
IS PAST DUE.
PLEASE REMIT

SIXTH STATEMENT

With the sixth statement goes a card, about five by three inches, printed on ordinary stock paper, in black or red ink, reading as follows:

Regarding Your Past-Due Account

Our records show that several statements and reminders have been sent you regarding the enclosed statement.

If your circumstances have made it impossible for you to pay the amount due, kindly write us promptly to that effect. Our office will then endeavor to extend all possible courtesies.

You appreciate, we are sure, that physicians, like others citizens, must pay their bills promptly. They can only do so, however, when their own clients in turn pay them promptly for such professional services as may have been rendered.

A check to cover your account, which is now considerably overdue, will be appreciated.

SEVENTH STATEMENT

With the seventh statement goes a similar card, on which is printed:

NOTE—The fifth, sixth, and seventh statements can now be sent at intervals of ten, fifteen, or thirty days, according as the physician thinks best,

Final Notice

In practically all businesses the custom which is generally followed with overdue accounts is to send such to a collecting agency.

Our bookkeeper has nothing in the records of the office to show when you intend to pay the enclosed account. Perhaps the previous statements and reminders may have been overlooked or ignored.

Following the rule of this office, this overdue account will be sent to the collecting agency within ten days if arrangements for its settlement are not made prior to that time.

The collection bureau method is disagreeable to us; and we believe, also to you. By promptly sending your check all this can be avoided.

When an account is sent to the collecting agency that organization takes full charge of it thereafter.

When the above series of statements have been sent, and the patient has not been heard from, it may be assumed that it is a very proper account for a collecting agency and is forwarded to one such.

All collecting agencies have their own methods, but they nearly always make it somewhat disagreeable if the person owing the money does not pay. Patients who do not pay are undesirable patients in private offices, and should not be permitted to rob physicians of time and energy. On the other hand patients sometimes are treated who suffer from temporary financial embarrassment, and such patients should have an opportunity to liquidate their indebtedness without undue hardship. The plan above devised, when used as a routine system, works to good advantage for both classes of patients. The number of accounts which go to the collecting agency is not very great, and the elimination of the undesirable patients is quite effective. A slip is usually clipped to the history card on which are noted the dates on which the statements were sent out.

Esthetics

WHEN THE FROST IS ON THE PUMPKIN

When the summer's busy season is over, the quiet of autumn gives warning of the hibernating season that approaches, and we

are confronted with the pleasurable anticipations of long winter evenings when we may catch up with current literature or reread our old favorites, a sense of relief comes to us—a promise of happiness is in the air. A poetic soul, writing for the "Kalends," house organ of the Williams and Wilkins Publishing Company, Baltimore, Maryland, has given expression to this feeling, under the above title, and we pass his remarks along to you:

"Down the old Joppa Road, breezing through the Dulany Valley, there comes an invigorating wind which chases the small, fleecy white clouds and herds them over the horizon. In the distance the bright sunlight now and then reveals the lace which the wind is crocheting upon the tumbled surface of the waters of Loch Raven. The long, lazy drifts of smoke from the garden fires of Autumn's leaves waft an acrid odor into the nostrils, which at times seems to exert a narcotic effect and sets one to dreaming of the camp fires of prehistoric ancestors. But there is a spicy tang in the air which is conducive to longer strides, deeper breathing, and which awakens a keener appreciation of Dame Nature's gold and scarlet artistry, displayed in woodlands and roadside hedges. Fine days for working.

When twilight draws to a close, what more can be desired than a comfortable chair, a cozy and cheerful open fire, and books? Amidst the silent but stimulating presence of the truly great men and women of all time, one can imbibe their wisdom, profit by their experiences, and admire the most beautiful word pictures which human mind ever conceived or human hand portrayed. Rare friends are they, never obtrusive, never selfish; who depart without anger when one wearies of them, yet who return cheerfully at one's call. New worlds in which to test the wings of one's imagination, and new vistas which open up deeper and broader conceptions of life's daily problems. Wonderful evenings for reading and romancing.

As one retires to rest and gazes out of the window, there comes into view the silvery moon, Queen of the Night, who, with all her attendant courtiers of stars and planets, makes her stately way across the firmament—silent, brooding, mysterious. When all is still, and one lies snugly between warm blankets, if the ears are keen there may be heard the flight of birds winging their way to the far and sunny Southland. And then peace and quiet. Good nights for sleeping."

Observations from the Lighthouse

THE PROBLEM OF HEART DISEASE

A very different situation, as J. H. J. Upham observes (Indiana State Med. Asso., 20:283, Aug., 1927), confronts the Association for the Prevention and Relief of Heart Disease from that which preventive medicine faced a few decades ago in undertaking the fight against such diseases as typhoid, malaria and tuberculosis. In these the exciting organism was known and the manner of entrance into the human body fully understood. In the case of heart disease, however, there are different etiologic factors and varying exciting organisms; in the most common type of all, the form following acute rheumatic fever in young and early adult life, not only is the organism not definitely known but neither is its mode of entrance established. Diseased teeth and tonsils are pretty closely linked up in the etiology, but largely upon circumstantial evidence, and it is not certain that these are the only atriæ of infection.

It seems to be generally agreed that the incidence of acute rheumatic fever has noticeably declined in recent years. Alexander Lambert states that of all patients entering Bellevue Hospital in 1907, 2.45% had acute rheumatic fever, whereas in 1920 only 0.52% were admitted with this disease, the intervening years having shown a steady decrease. This change has been generally ascribed to the greater frequency of tonsillectomy in children but this cannot be definitely asserted. The problems which bear upon the many phases of heart disease are so numerous and so divergent that the chief aim now lies in the gathering of all possible data on the subject to the end that they may be systematically analyzed and the pertinent facts correlated. To expedite this accomplishment the interest of the entire medical profession must be enlisted in a country-wide program of cardiac observation and study.

Modern Increase in Heart Disease

The real prevalence of heart disease is not shown by our vital statistics nor do they give an accurate record of actual cardiac mortality. Many individuals with heart disease die from infectious diseases or other causes, leaving no record of cardiac pathology, while, on the other hand, many sudden deaths are reported as cardiac failures when autopsy would show the cause to be quite different. Toward improving the accuracy of our vital statistics every physician can contribute important assistance. If a crippled heart has played an important part in the fatal termination of an illness, it should be mentioned in the death certificate as a contributory factor. If, however, the underlying cause of a plainly cardiac death is arteriosclerosis or nephritis, this should be indicated in the death certificate. Such observance would be a great step toward determining the exact rôle played by heart disease in our current mortality.

In the age period from middle life, heart disease becomes the one greatest assigned cause of death. In order to make proper deductions from these mortality statistics, one must take into consideration various etiologic factors operative at different age periods and the ordinary progress in heart cases. The involvement of the heart following childhood infections is rarely immediately fatal; in fact, the onset is so mild, or is so masked by the more noticeable symptoms of the primary in-

fection, that it is frequently overlooked. The young heart muscle is resistant and recuperative; compensation is quickly established, and the child has an excellent prospect of living to adult life in a properly adjusted environment. In adult life these infections occur with decreasing frequency, becoming very rare after the age of 50 years, when syphilis becomes an important etiologic factor in increasing the quota of cardiopaths. The actual increased mortality, however, from these cases is chiefly the result of social and economic factors—of the necessity for hard labor during the age period which brings the cardiac breakdown. Progressively, therefore, toward middle age more and more patients with hearts damaged by rheumatic infections, with the addition at this time of life of those crippled by syphilis, die clinically heart deaths, so that the statistic increase is readily explainable. After the age of 50 or 55, systemic and organic changes (hypertension, beginning arteriosclerosis, nephritis, pulmonary emphysema) throw increasing burdens on the heart muscle, and many damaged hearts that have weathered the storms of middle life, give out. Another group comprises practically exhausted hearts, overworked in striving to maintain the circulation through sclerotic vessels, or against vascular hypertension, through emphysematous lungs, sclerotic kidneys, or secondary to toxic goiter. It is the featuring of this group, with no history of rheumatism, syphilis or other known infection, that accounts, in the opinion of Upham, for the tremendous rise in cardiac deaths at this age period and the alleged great increase in heart disease so often referred to in recent years. The hearts in this groups are exhausted, rather than diseased, the disease being in quite other systems or organs.

The study of prophylaxis in heart disease, therefore, must embrace these 3 distinct types, all of which may present terminal stages that are clinically almost identical, but whose etiology is entirely different.

Prophylaxis of the rheumatic infectious type is very seriously complicated by the fact that the causative factor is not yet established; hence, the difficulty of barring its entrance is apparent. Inasmuch as 2% of school children still have heart disease, and many of these have had tonsils and adenoids removed, one cannot urge those measures as a prophylactic guarantee, although the possible benefits from their removal are well worth the risk of operation. Much greater attention should be paid to chorea in the milder forms and to the vague pains of childhood, so often dismissed as "growing pains", in which foci of infection should be carefully investigated. Prophylaxis of the second type is that of syphilis in general. The prophylaxis of exhausted hearts is a very complicated problem, for it must include many economic factors, infectious diseases, overweight, lack of exercise, mental worry, but above all, arterial hypertension, arteriosclerosis, nephritis and pulmonary emphysema. Focal infections are omitted because, in the author's opinion, their importance has been exaggerated and has led to great abuse of the word myocarditis, which is in the experience of most pathologists a very rare condition. The term should be restricted to the relatively few instances of definite infection.

At the present time, substantial results in prolonging the lives of cardiopaths will result from wider recognition of the fact that a decompensated heart is more often a worn out heart than a diseased heart. The increase in mortality rate ascribed to heart disease is not due to heart dis-

ease per se, but rather to increased frequency of disease of related organs and systems, due in large part to changed economic and other factors of modern life.

Some Causes of Heart Disease Other than Infections

"I hold to the opinion that the cause of almost all pathologic changes which take place in the heart originate from infection of some sort, although we may not be able to trace the origin", says J. F. Chandler (J. Missouri State Med. Asso., 24:296, July, 1927). The most common cause of disease of the heart, other than infection, is strain of some sort. It may come about slowly through continuous physical or mental effort, or develop suddenly from violent exertion or emotional excitement. It may result from overstimulation of the organ by medicines, such as strychnin, digitalis, or alcohol in massive doses. A common cause of cardiac trouble with disturbance of rhythm is found in emotion—sexual excesses, worry and prolonged anxiety. Bronchial asthma, while not a common cause of heart disease, should not be overlooked. Hypertrophy of the heart may be of physiologic or pathologic import; physiologic in the athlete, and primary idiopathic in the common laborer; pathologic as a result of overwork and causes of a morbid nature. It is the opinion of Chandler, however, that most of the pathologic changes result from infection. As an aftermath of impaired nutrition, prolonged anemia, obesity, chronic alcoholism, acute arsenical poisoning and phosphorous poisoning, fatty degeneration of the heart may ensue. Overstimulation of the heart may result in complete exhaustion, necessitating absolute rest in bed.

Cardinal Principles of Cardiac Diagnosis

Although heart disease has ranked first in the mortality statistics of this country during the past few years, it is common experience, according to William D. Reid (Boston Med. & Surg. J., 197:132, July, 1927), for the specialist to be unable to confirm the diagnosis of heart disease in about $\frac{1}{3}$ of the cases sent in. He quotes Sir Thomas Lewis as going even further in stating that $\frac{3}{4}$ of the cases diagnosed today as cardiac cases do not belong in that category.

It is a good rule, Reid continues, to resist the diagnosis of heart disease in patients under 40 years of age, unless one or more of the chief reliable signs are present. In the elderly the contrary is true. The signs referred to are as follows: (1) distinct overdilation of the veins of the neck; (2) a precordial thrill, if a definite "purr" (a slight vibration is insufficient); (3) an unmistakable pericardial friction rub; (4) a diastolic murmur at the apex or base (exceptions rare); (5) an irregular rhythm, persisting after exercise, especially if the rate reaches 120 or higher; (6) definite signs of enlargement of the heart; (7) *expansile* pulsation of the liver; (8) widespread arterial disease, or a persistent blood pressure of 160 or above in a young individual, or of 180 or higher in the elderly.

Well marked vascular phenomena of aortic insufficiency are almost as diagnostic as the diastolic murmur at the base. In the determination of cardiac enlargement, palpation of the character and location of the apical impulse is more valuable than the results of percussion. A comparison of clinical signs with postmortem findings shows that moderate degrees of cardiac enlargement are not detected with accuracy by our bedside

methods; in doubtful cases resort to Roentgen mensuration is most helpful. Attention is drawn to the fact that, because of the frequency of a pulse deficit, observations regarding rate and regularity must be based upon auscultation of the precordia rather than on palpation of the peripheral pulse. In irregular rhythms, if there is a constant quickening of the heart rate during deep inspiration, auricular fibrillation is not present; nor should this diagnosis be made if the irregularity is not absolute. A diastolic rumble and diastolic thrill at the apex are the 2 best signs of mitral stenosis. A thrill is a reliable sign of structural change in the heart only if it is a definite "purr"; in such cases, however, it will be accompanied by other unmistakable signs; it is not a valuable sign in *doubtful cases* of heart disease. Pulsation of the liver is evidence of broken compensation of an advanced degree; it must be established as really expansile and not merely a forward thrust imparted by the underlying aorta. Presystolic murmur has been omitted from the list of reliable signs of heart disease because this sign is rare and there is a difference of opinion about the crescendo murmur of early ventricular systole, which is often held incorrectly to be presystolic instead of merely pre-sound.

Minimal Symptoms and Signs.—Angina pectoris is a clinical syndrome which must often be diagnosed in the absence of any physical signs of structural change in the heart. If physical signs be present they are not due to angina pectoris but to the heart disease with which the anginal syndrome is associated. This is perhaps the only affection of the heart which must be diagnosed from the symptoms or history alone. The relief obtained from rapidly acting vasodilators goes far to confirm the diagnosis. A lessened exercise tolerance is at times of considerable importance, especially in elderly patients. In young individuals, however, without signs of definite enlargement of the heart, mitral stenosis, aortic disease or auricular fibrillation, a deficient exercise tolerance should rarely be attributed to the heart; tuberculosis or pyogenic infection should be suspected. In some cases where the heart is normal to ordinary clinical examination the electrocardiogram may disclose evidence of disease of the myocardium; suggestive symptoms are, however, rarely absent. The appearance of a systolic murmur over the apex in febrile conditions brings up the question of the presence or absence of infection of the heart, i. e. acute endocarditis. While it is natural to desire to determine at an early stage when the heart has become infected, it does not appear that we have yet the means of doing so. One may consider such cases as "potential heart disease", and continue observation of the patient until the status is made clear. Septic heart disease may appear in the so-called silent form in which a heart murmur is absent. At times attention is first called to the heart by results of emboli, or fever of irregular type, anemia, palpable spleen, painful and often swollen joints and certain skin eruptions. A positive blood culture, usually streptococcus viridans, is perhaps the most important diagnostic sign.

Unreliable Symptoms and Signs.—There are many symptoms and signs which, though often present with organic cardiac disease, are so frequently associated with a heart that is normal (as proved by subsequent course and postmortem) that they must be classed as unreliable evidence of heart disease. These include palpitation, submammary pain, some degree of shortness of breath, dizziness, fainting, exhaustion, fatigue in

the legs, etc.; the normal protodiastolic gallop—third sound—in the young, the unimportant systolic murmur in the pulmonic area, the frequent systolic murmurs at the apex in the recumbent and left lateral postures, the loud cardio respiratory, inspiratory murmur so often heard around into the back, respiratory arrhythmia, extrasystolic arrhythmia in the absence of other signs of cardiac abnormality, tachycardia of moderate degree and of inconstant rate, so-called "weak sounds", crescendo quality of the first sound, split first sound, reduplicated second sound, accentuated pulmonic second sound, slight thrills and cold clammy hands.

In instances where the presence of heart disease has been established it is highly desirable to carry the diagnosis further and determine the type—that in which the etiology is expressed so far as known. Today, heart affections are considered from the standpoint of (1) causation, (2) structural change, and (3) function. A heart diagnosis is not complete until items are entered under these 3 headings, and it is believed that diagnosis of cardiac disease according to the etiologic type is not less accurate nor essentially more difficult than the older system based upon the structural changes or anatomic lesions.

The term "myocarditis", as commonly used, may be called a "waste-basket diagnosis". So far as is known, there are no reliable criteria upon which to base myocarditis as a complete clinical diagnosis.

The Diagnosis of Coronary Occlusion

The discussion of this subject is opened by I. I. Lemann (New Orleans Med. & Surg. J., 80:73, 1927) with 2 rather detailed case reports, the purpose of which is to illustrate the now well recognized sequence of events following an occlusion of a coronary artery: pain, prostration, fall in blood pressure, fever, leukocytosis, pericarditis, and in 1 case embolism to the brain, arrhythmia and characteristic changes in the electrocardiographic tracings. The fact that it was possible to survive for months, or even years, after an occlusion of a coronary has become generally recognized only in the last 2 decades. That coronary thrombosis was considered as essentially a post-mortem finding was due in part, no doubt, to the influence of Cohnheim's teaching that coronary arteries are end arteries and that their occlusion must bring immediate death. In part, too, failure to recognize the condition *intra vitam* must be attributed to the confusion and controversy which still reign with regard to the pathogenesis and significance of angina pectoris and of cardiac pain in general. Although the work of Head has served to teach the significance of referred pain, there is still a desire to attribute all precordial pain to angina pectoris and to explain the pathogenesis of the latter upon one basis. The fact remains, however, that angina pectoris has existed where no coronary disease was found, and extensive coronary disease has been found where no angina pectoris had existed. The truth as to angina pectoris, as Vasquez has pointed out and Hamman has again recently emphasized, is that it is not a disease but a syndrome. Because of the latter day proposal to relieve angina by cutting the reflex, it becomes all the more important to study this syndrome and to attempt to segregate those cases due to organic heart and coronary disease from those due to a functional cause. Such a differentiation is not always easy and the recognition of small branches of the arteries may be easily overlooked, as is indicated by the following history: A

man of 42, was taken suddenly with a sharp, knife-like pain in the precordium shortly after a very light evening meal. He had just had a disagreeable controversy. The pain continued all night and the next day but he did not seek medical advice for 24 hours. Nothing abnormal was found at that time nor at a second examination the following day, although the patient insisted that he had not slept for nearly 48 hours and that any exertion, even bending over, increased the pain. Later that evening it became so great that 2/3 gr. morphin had to be administered. Blood pressure had risen from 130 systolic in the afternoon to 150 systolic; next morning, after a quiet night, it had fallen to 110 systolic, 70 diastolic. In the evening the heart rate was 84; no murmur, no irregularity; temperature 100.4° F.; less pain but generalized discomfort; leukocyte count 10,000; polymorphonuclears 77%. Next day the leukocytosis rose to 12,000; temperature ranged from 99.5° to 101°; patient looked more toxic; color of face was dusky, pulse 72, blood pressure 104 systolic, 80 diastolic; no murmur, no irregularity; lungs normal; some precordial pain. Examination the following morning revealed no murmur, but at noon there was a very distinct leathery rub to be heard from the left border of the sternum to the left posterior axillary line. Blood pressure 98 systolic, 66 diastolic. The murmur was no longer heard after 2 p. m. An electrocardiogram made 6 days later showed coronary T waves with inversion in leads II and III; Q. R. S. complex was notched in leads II and III. In spite of strong advice to the contrary, the patient left the hospital on this day. He was free from pain and apparently in normal health.

One notes in the foregoing how relatively mild an attack of coronary occlusion may be and how transitory and elusive the physical signs. When we put together, however, the clinical picture of precordial pain, falling blood pressure, transitory pericardial friction sound, fever, leukocytosis, characteristic coronary T wave in the electrocardiogram, we can have no doubt as to the diagnosis. This patient probably suffered occlusion of one of the smaller coronary vessels. We must remember that even extensive thrombosis of the coronary system is not incompatible with life. Paul D. White has reported a series of 62 patients in whom the average duration of life after an attack of coronary thrombosis was 20 months. Some of these patients were still living at the time the report was made and White expected that this average would be considerably lengthened after an interval of years when the final estimate on all cases can be made.

It is not always the precordial pains that dominate the picture of coronary thrombosis. The pains may simulate intraabdominal disease (perforated gastric or pyloric ulcer and particularly gall-bladder trouble). The sudden deaths ascribed to "acute indigestion" are in reality due to coronary occlusion.

Contrary to the teaching of text-books, there is no characteristic attitude of the patient during attacks of angina and coronary occlusion. One individual may remain absolutely immobile while another may find relief by a rocking chair motion. One patient cited overcame the efforts of 4 attendants to keep him in bed during an attack. The fact that some patients of the author's had no premonition of death robs us of another commonly taught mainstay of diagnosis of angina.

Some of the More Favorable Features of Heart Disease

Many people, some of them physicians, believe there is no such thing as a mild form of heart disease. The dramatic rise of cardiovascular impairment to the unenviable position at the head of the mortality list has caused a shudder of dread to go through the lay and professional public. The impression prevails that comparatively little can be done to ward off or check the progress of heart disease. James B. Herrick (J. Indiana State Med. Assn., 20:247, July, 1927) is of the opinion that it would be easy to show that these gloomy notions are only partially warranted by facts; that much may be accomplished in the way of preventing cardiac break-down, and that many of those whose hearts are temporarily unfitted for work may, by proper treatment and readjustment of living conditions, be restored to efficiency only a little below normal. The more somber view of heart disease may also be brightened by the fact that there are cardiac conditions that are not serious, or only mildly so. This is a question that concerns not only the general practitioner, but also the internist as a specialist, and even the surgeon.

Physicians are often responsible for these pessimistic notions regarding the heart because of certain errors they are liable to make. One error has to do with the art rather than the science of medicine, and concerns the question of *how* we examine for heart disease, and *how* we tell the patient the result of our examination. Comments on slight irregularities, faint murmurs or other alterations of tone, or on trifling alterations in the size of the heart should generally be withheld entirely or made with extreme caution. Many phobias have been started by disregard of this policy. In telling a patient of the existence of organic heart disease, much tact is required. An explanation of the existing condition, with the directions to insure as great a degree of comfort and length of life as possible, as hopeful an outlook as can be conscientiously conveyed, will, if sympathetically offered, lead to a proper mode of living and a minimum of fear. The intelligent man is to be so treated. The more ignorant one is ordered to do as told; danger is minimized and fears allayed.

These are matters of technic; they assume that the nature of the heart symptoms are understood. In other cases, however, the fault is one of knowledge—a mistake in regarding as serious what is really trivial, in applying the label "heart disease", with all the ominous meaning attached to that term, to symptoms that are mild and perhaps not cardiac at all. One of the most fruitful causes of this error is ignorance; haste and carelessness also contribute, as do overemphasis on heart rate, regularity of rhythm, size of heart, heart murmur and roentgenograms, the physician having in mind too fixed an idea of what is normal. The large majority of such mistakes, however, are probably due to his dread of passing up real organic diseases as negligible; in other words, his altogether praiseworthy desire to do the right thing by his patient before it is too late.

Some of the milder conditions in which mistakes are prone to occur are found in that group of patients who are fearful that they might have heart trouble and wish a definite expression of opinion. Such an individual is relieved of anxiety if the physician examines him carefully and can assure him that conditions are normal. If, on the contrary, the doctor hesitates in expressing an opinion; manifests doubt as to the existence of a mur-

mur, or the size of the heart, or its rate; comments on a slight change in the blood pressure, harm is apt to result, for this individual's mind is in a receptive mood and the seeds of doubt find fertile soil, developing rapidly into a flourishing fear—a vigorous phobia.

A patient with the fixed conviction that he has heart trouble is another who needs thorough examination, careful explanation, repeated assurance. His nerves and mind need treatment rather than his heart, as is also the case in the so-called irritable heart group. Here the diagnosis is by no means easy with the syndrome of precordial distress, tachycardia and palpitation, dyspnea and weakness. Only by careful exclusion of signs of change in the size of the heart, by absence of murmur, altered second tones, and irregularities does one conclude that no organic disease is present. Also, cyanosis is lacking. The dyspnea is really an occasional sighing respiration rather than difficult breathing. Physical exertion, as in the hopping test, shows that the heart quickly comes back to its old rate and that true dyspnea does not result from the exercise. Similarly, tuberculosis, exophthalmic goiter and other causes for the irritable heart are excluded.

Another simple condition that is not infrequently misinterpreted is the respiratory arrhythmia so often seen in children. This is really a sinus arrhythmia in which, through the influence of the vagus, which in turn is influenced by the act of breathing, there is an alternate slowing and hastening of the heart's rate. Where this is marked the difference between the slow and rapid rate may be so great as to lead the physician to fear some myocardial or other grave lesion producing auricular fibrillation. In these cases prolonged observation will show that the rapid rate is during inspiration; during expiration the heart slows. This is a normal phenomenon and need excite no comment. It needs no treatment.

Another stumbling block is the extrasystole or premature beat. In a large percentage of cases this condition is harmless, although it may become extremely annoying to the patient. The cause is often toxic—tobacco, alcohol, tea, coffee, constipation, focal infection, worry, fatigue, insomnia, digitalis, or a mixture of these. Removal of the cause and encouragement of the patient will effect a cure. Great harm may result if the physician views the skipped beat as warranting extreme caution in regard to exertion, thus adding to the apprehension of the patient and aggravating the nervous cardiac phenomenon. On the other hand, extrasystole appearing in adult years or on exertion must be treated with respect. It may be one of the first manifestations of disease in the myocardium, and under such circumstances other evidences of organic disease should be sought for.

The same policy should be followed in regard to paroxysmal tachycardia, in which the extrasystoles may occur as rapidly as 150-200 to the minute. The attacks, which begin and end suddenly, may last from a few seconds to a few days and often greatly alarm the patient. Only rarely, however, do we see cardiac failure with serious consequences. Reassurance from the physician will go a long way toward carrying a patient through such a seizure and leaving him psychically unharmed.

There still remains a widespread tendency to regard an endocardial murmur heard under any circumstances as indicating organic (valvular) disease. While the safe way is to throw the burden of proof on the one who declares an endocardial murmur to be insignificant (in other words, to as-

sume an organic origin for such a murmur), we must be prepared to ignore a systolic murmur at the apex when there is no history of rheumatism, no enlargement of the heart, no altered pulmonic tone, no irregularity, no cyanosis or dyspnea. Particularly is this true when the murmur is heard only when the heart is rapid, or only in certain phases of respiration, or in connection with fever or anemia, or when the patient is run down. Doubtful cases may be reëxamined. Furthermore, are we not inclined to be too pessimistic regarding many lesions known to be organic? A slight mitral leak, a trifling aortic leak, a systolic blow at the base that we are sure means a roughened aortic wall—these lesions are not to be neglected, but their gravity should not be magnified beyond reason. A heart whose muscle is efficient, as shown by the ability of the organ to meet easily and naturally all ordinary demands, need rarely cause us worry, even though there may be a murmur or some other trivial departure from the condition that has long been regarded (largely artificially) as normal.

This is a plea for more care in the diagnosis of heart disease, and especially for recognition of a group of mild cases with heart symptoms that are not to be viewed with alarm; for tact in examination and in treatment of the disease as well as of the patient. By following these precepts many cases of supposed heart disease will be cured and much anxiety, mental suffering and invalidism will be prevented.

Medical Book Reviews

(Royce Paddock, M. D., Department Director)

CLINICAL PHYSIOLOGY (A Symptom Analysis). In Relation to Modern Diagnosis and Treatment. A Text for Practitioners and Senior Students in Medicine. R. J. S. McDowall, New York—D. Appleton & Co., 1927: 363 pp., 4 plates. Introduction by Prof. W. D. Halliburton.

The promise of the title shown above is well fulfilled in this book by Dr. McDowall, who, although a professor of physiology, retains a clinical viewpoint throughout this valuable survey of the medical field in the light of physiology. This attitude is at once more humble and useful than the works named with more forbidding titles (such as pathologic physiology).

A useful rather than an awe inspiring purpose is seen in the absence of graphs and detailed technical illustrations which would not elucidate a plain and well written text for the doctor's library. The large page and excellent print and binding are in keeping with its serviceable aim, since the book covers a large field without running to the gigantic size and weight unfortunately fashionable in many medical books. A few typographic errors can be pointed out, and occasional vagueness of style, but only occasional. The book begins with a general consideration of life. This naturally vague question is confined to a little over 3 pages, another illustration of the value of brevity.

The chapters following take up the physiology of the nervous system in its clinical applications: Consciousness, Voluntary Movement, and Sensation. Under Consciousness the author notes the favorable position of the medulla, containing the

vital centers, as regards blood supply, being not dependent on the carotids alone, but able to continue their functions by means of the vertebral supply after carotid occlusion, while the higher centers, and consciousness, are unable to function.

Two good diagrams indicate the pathways of sensation and voluntary movement. In discussing sensation, the author stresses the mental factor in normal sensation as a help in understanding such clinical entities as referred pain and hysteria. We "refer" the sensation from the disturbed visceral region to a corresponding area of the skin (i. e. one supplied by the same spinal root) because we are accustomed to receive our sensations from the skin. Stomach, gallstone, renal calculus, and anginal pains are cited. McDowall here points out very wisely that the patient may become "educated" enough to refer the pain to the organ which he learns is affected, and no longer to the skin. Furthermore, the over-introspective patient will even refer superficial pains to their supposedly ailing viscera, as the patient who felt "a little peppery along the left ureter" is said to have done. Children will not usually be able to localize the pain sufficiently to "refer" it to the skin. The main reason for this self-deception he places in the vagueness of visceral sensation which is apparently evolved by muscular spasm. On this basis stands the explanation of the subsidence of appendix pain when the muscular wall becomes paralyzed by toxin formation in appendix abscess and gangrene, and the difference between the steady parietal peritoneal pain which distinguishes a retro-cecal appendix and the ordinary intermittent visceral pain or "colic."

So hysterical anesthetics, believed to be the product of suggestion in hyper-suggestible subjects have their counterpart in hyperesthesias due to mental conditions such as, most usually, the fear of being hurt. Such abnormal sensations may lead to needless operations, if localized.

A good part of the book is devoted to the clinical physiology of the circulation, and, as would be expected, the excellence of the work is specially noticeable in this section. The author takes a considerable number of paragraphs to elucidate the circulatory mechanism. The Law of the Heart is that within physiologic limits, the force of the heart's contractions depends on the extent to which the heart muscle has been stretched by the entering blood. This law is applicable to all muscular tissue in respect to the contraction and load involved; in the case of the heart, this load depends mainly on the venous pressure, since the filling is not cut short by the increased rate of the heart under exertion, while the increased venous pressure during exertion supplies a greater load, and hence, a greater contraction. To this greater contraction is added a speeding up of the heart rate produced reflexly from the rise of venous pressure through increase in sympathetic and decrease in vagus tone. Hence the commanding importance of the venous pressure in bringing about the extra work of the heart when needed.

This rise of venous pressure is produced, under physiologic conditions, i. e. exercise, in part by the accumulation of carbon dioxide from muscular action. This gas in solution both constricts the veins directly and by central vasomotor stimulation. The increased muscular and respiratory movement also tends to increase the pressure in the great veins of the thorax, while

the fibrous pericardium acts as a safety check to mechanically prevent over-filling, and hence over-loading of the ventricle. In other words the author claims that the active muscles for the most part control their own blood supply, though indirectly.

This purely physiologic mechanism is made use of in conditions such as toxemia, where the cause of the increased venous pressure is no longer physiologic, but pathologic. Here the toxins impair efficiency of the heart and the resultant back pressure increases the venous pressure with similar results, i. e. increase in rate and force of the heart. McDowall points out, then, that increased heart rate not due to pain, apprehensiveness, or fever, may be due to a toxemia such as appendicular abscess with destruction of the appendix wall, when other symptoms are lacking, or may indicate early tuberculosis. Incidentally, he emphasizes the importance for the future of developing clinical methods for the measurement of venous pressures, and states that methods as inaccurate as von Recklinghausen's pressure obliteration of veins are still useful as indicating daily changes in a case under observation. The corollary to this emphasis is that in his mind, in addition to the usual methods used in acute cardiac failure, such as rest propped up in bed, blood-letting "is certainly indicated on physiologic grounds" in cases in which the venous pressure is obviously raised, and no contraindication, such as anemia, exists. Enough blood should be let to reduce the arterial blood pressure 20-30 mm. when the effect on the venous pressure will be more marked and lasting.

Following this discussion of mechanisms, two excellent chapters cover the subject of the pulse, heart sounds, venous pulse, and electro-cardiograph in brief but orthodox style, with one good illustration comparing the venous pulse waves with the E. K. G. tracing, second lead. He states that "the character of the heart sounds only gives a very limited amount of information regarding the cardiac muscle." He values exercise, such as bending twelve times to touch the toes, or attempt it, but remarks that the normal habits of the individual must always be considered, as well as the weight: for if the exercise is not habitual, the exertion is much greater. In this regard, the opinion that a well-taken history is a more valuable index of cardiac efficiency than any functional test does not appear to be a part of the author's convictions. Following chapters on blood pressure, the integration of the circulation, the histology of the blood (rather brief) a summing up chapter on physiologic principles in relation to cardiac efficiency and disease gives evidence of a broad but careful treatment of this subject. In the convalescent cardiac he urges the use of graded exercises and explains their value.

From the point of view of physiology, reflexes are of the greatest importance in explaining the body mechanisms. The author uses some care in describing the phenomenon known as the "conditioned reflex" of which the most striking example is the dog trained by Pavlov and his associates to expect to be fed at the sound of a certain note on the piano. The dog salivates at that note and not to the other notes of the scale. In man the every-day example of driving a motor is given, an act first associated with a great deal of conscious effort. The ability to act quickly and correctly and automatically in a critical situation shows the value of acquiring

such a conditioned reflex which finally leaves the higher centers free, by becoming a "habit." This ability to form conditioned reflexes is applied by the author to the vast field of functional nervous conditions in a chapter in which he attempts to show "how matters psychologic may be studied without quite ignoring physiologic laws." The views of the newer psychologists he considers "too sweeping, too revolutionary and far-fetched to be adopted by the majority but the fundamental principles of the new psychology are of such immense practical value in enabling one to comprehend the symptoms found in the psycho-neuroses that their usefulness can hardly be questioned." In discussing the "complex" as a reflex, he advocates the use of suggestion in the psycho-neuroses. His comment is, "Mild suggestion is often effective, especially when associated with some striking, especially physical, form of treatment, and here is the realm of much quackery, as the treatment rather than the suggestion gets the credit for the cure." The more striking the method of suggestion, the better chance of replacing the complex by a new reflex pathway.

In the section dealing with the respiratory functions, there is much that is as yet too incompletely understood to be simplified. The treatment of this subject is thus somewhat more fragmentary and scattered than in the case of the circulation. One fact of importance is brought out in the explanation of the altered physiology of pneumonia. The breathlessness and cyanosis of the first day or two is explained by an unobstructed circulation passing through a lung not properly oxygenated. This may improve following consolidation and obstruction of circulation through the consolidated portions. The real danger then is the development of the rapid shallow type of breathing emphasized by Meakins, and the lack of oxygenation resulting from this inefficient breathing may play a large part in the failure of the heart. More interesting to the surgeon, perhaps, is the explanation of the respiratory failure in the first stage of anesthesia, or a less dramatic form of surgical shock from the same cause—over-ventilation and excessive removal of carbon dioxide which supplies the normal stimulus to respiration.

For the first of these conditions, pneumonic shallow breathing, oxygen is strongly advocated, and the funnel method of giving it condemned. McDowall recommends the use of a catheter retained in one nostril, and in general using the oxygen early, before cyanosis has developed, in all cases where the prognosis is bad. Tents he considers impracticable, masks uncomfortable. He advises keeping up oxygen therapy until the type of breathing has improved.

For the anesthesia, besides the use of narcotics and tropin, the inhalation of carbon dioxide has been advocated by Yandell Henderson.

On the subject of the alimentary physiology the author gives out some views which serve to support our "common sense." They are mainly an insistence on the mental factor in eating and the importance of studying the likes and dislikes of the patient in regard to food—steps which were urged by Florence Nightingale in the Sixties, here supported by physiologic data. Such ordinary ailments as the "bilious attack" are included, with probable explanations, and the functional disturbances preceding gastric ulcer are dwelt upon. Here the author points out the service which the practitioner can

perform in defining the relation between eating habits and gastric symptoms.

With the remainder of the book, the whole field of physiology is briefly but accurately covered. The water content of the body; the temperature of the body; exercise and rest, all give the rationale of hygiene. A good chapter, not too complicated, on the autonomic nervous system gives the basis for the hormone and drug reactions of the body. Endocrines are very briefly considered, marking the attitude of the physiologist, who stops at facts with very brief mention of hypotheses.

The final chapter summarizes the measures recommended by the physiologist in the treatment of emergencies. Primary cardiac failure, failure of aortic pressure, failure of respiration, and extremes of body heat are the headings.

The appendix deals with carbohydrate, fat, and protein metabolism, as well as hydrogen ion concentration, and the respiratory function of the blood—scientific subjects separated from the body of the book, which keeps throughout a clinical aim. An excellent bibliography follows the praiseworthy method of including the titles of the standard books covering the work of each section, and no periodical literature.

SHELL SHOCK AND ITS AFTERMATH. By Norman Fenton, Ph. D., Associate Professor of Psychology, Ohio University. Introduction by Thomas W. Sahnun, M. D., Professor of Psychiatry, Columbia University. (St. Louis: The C. V. Mosby Company, 1926.)
(Reviewed by C. C. Beling, M. D., of Newark)

This book is a firsthand study of War Neurosis, (shell shock) in a group of nearly 3000 patients who were admitted to Base Hospital 117 in France, and were followed up in 1919-20 and again in 1924-25, through the coöperation and assistance of the National Committee for Mental Hygiene. It is a valuable contribution to the study of war neurotics, both during active service and after their discharge from the Army.

The author takes up the problem of shell shock in the A. E. F., describes a typical group of men who developed war neurosis, their mental and physical makeup and their social and economic background. He then sets forth the condition of these men shortly after their return to America, what the American nation has done for them and how they have adjusted themselves to civilian life. The book is concluded with a consideration of the nature of war neurosis and its aftermath.

Dr. Fenton states that "Though hypotheses are available in great numbers, the true pathology of neurosis is still to be discovered. Yet though a description in terms of neuropathology is lacking, there are still many other sources from which insight into the nature of war neurosis and its aftermath are to be obtained."

"Three general considerations were taken up concerning the type of men who developed a war neurosis. First, their military significance and value; second, their mental and physical makeup; third, social consideration regarding them." The study brings out that there is no "adequate justification for defining the causation of war neurosis in terms of neuropathic background alone. "The men who developed neurosis during the war, were as a group, fairly typical soldiers of the American Army and not some special selection." The psychological and physiologic bases for the development of neurosis are considered. The most inter-

esting of these is the discussion of Professor Royce's conception of the "reversible" quality of neurotic or functional conditions. The features in the coming and going of neurosis, important in connection with the consideration of neurosis aftermath, are: first, that, in developing, the neurosis may symptomatically take hold of practically any part or function of the body, viz., the sensations, muscles, memory, etc.; second, the neurosis may resist the impulses to its removal before finally leaving the body; third, in going, the neurosis sometimes leaves imprints upon some bodily system; and fourth, there is the fact that the neurosis sometimes becomes part of the habit system of the individual.

"*Cure of the neurosis is therefore always relative.* The neurosis like all other habits, involves certain positive tendencies toward redevelopment, and on the negative side, it serves to weaken the individual's resistance to preventing its recurrence."

"The implications of this concept of neurosis for education are obvious. Since neurosis is so often a matter of habit formation, then parents and teachers may, through neglect or unwise attitudes toward children, be partially responsible for the genesis of such symptoms in children. The teacher's need for a fundamental understanding of the nature and control of neurotic attitudes and expressions in children of the elementary school, and in high school and college students is apparent. By proper guidance and timely counsel, potential neurotics may be spared much unhappiness and their families considerable expense and annoyance."

The book is a useful contribution to the study of neurotics and should be of value to those interested in their rehabilitation.

Communications

(Letter from Joseph A. Maclay, M.D., of Paterson, in response to the request for reasons for small percentage of membership attendance at State Society meetings.)

I am included in the list of nonattendants at our State Society meetings and as you ask me why, in the November Journal, I am taking this opportunity to explain.

Nonattendance at the state meetings is concomitant with nonattendance at the county society meetings and, speaking for Passaic County, I know there is a lamentable falling off in attendance at its monthly meetings. My theory for this may surprise you. I expressed this thought in my annual address to the members of the Passaic County Medical Society a few years ago, at the conclusion of my term of service of a year as its president. It is that the organized medical profession is suffering from large overdoses of meetings, for which I blame usurpation by the American College of Surgeons of control of most of our activities and attempted displacement of the influence of our county, state and national societies.

Speaking now of my own city and county, conditions in which I am perfectly competent to speak of after living here all my life and practicing here for the past 25 years, since the A. C. S. came into being and usurped our right to individual thought and action (it has been telling us what to do and what to think since its inception, holding a stuffed club over our heads

to force the issue), each hospital in this county is supposed to hold "clinical" meetings once a month. Most of us are members of the staffs or courtesy staffs of all the hospitals hereabouts. This means we are expected, somehow, to attend all these "clinical" meetings each month. The county society meeting is another, but we do not lose our scalps if we do not attend that. In my own case I have our regular hospital staff meeting to attend, and the hospital board of managers meeting also; besides the special committee meetings to which I may be appointed. This means 6 to 9 meetings a month for me, and that is a small number. Some men, more widely connected, can have as high as 12 to 15 meetings a month, all touching on or appertaining to the practice of medicine. I often wonder when it is possible for a well connected man to do any private work or get any recreation or even be on speaking terms with his family, aside from having any social intercourse.

Without any attempt to consider our local conditions here, the A. C. S. arbitrarily divides our county into cliques, each identified with a hospital. For Paterson, this has worked nothing but harm to our county society. Formerly, we were just like a large family of physicians and surgeons, meeting once a month, with large attendance. We had lively, interesting and exciting meetings. Contributions to the scientific program from the members was the order of the day and I dare say the memory of those meetings lingers with us yet. Now (and this in itself is very unfortunate) we are divided into 3 hospital cliques, which also divides us into 3 religious creeds, for, as it has worked out, we have a Jewish, a Catholic and a Protestant hospital here; and, the same order obtains in Passaic, the other large city in this county. It is surprising how tightly the lines have been drawn of late years and what a bad influence this has created. I hesitate to go into its perniciousness.

What our State Society needs is reflected from the needs of our county societies—indifference of thought and action and resistance to the force which seeks to dictate uncompromisingly in our personal, hospital, local and state medical activities.

Think it over and let me hear from you.

(The Editor thanks Dr. Maclay for his response to the query, believes that this explanation and complaint deserves serious consideration, and hopes it will be discussed in letters from other members.)

AMERICAN COLLEGE OF SURGEONS, PENNSYLVANIA, NEW JERSEY, DELAWARE SECTION,

**DuPont-Biltmore Hotel, Wilmington, Delaware,
January 16-17, 1928**

Chicago, December 16, 1927.

My Dear Doctor Reik:

The Sectional Meeting of the American College of Surgeons for the states of Pennsylvania, New Jersey and Delaware is to be held at Wilmington, Delaware, on January 16 and 17, 1928, with headquarters at the DuPont-Biltmore Hotel.

The program includes clinics in the Wilmington Hospitals, clinical addresses, scientific meetings, and a Hospital Standardization program consisting of a round table conference, discussions, and

visits to hospitals. A Community Health Meeting will be held on the evening of January 16.

A distinguished group of visiting surgeons will participate in the program of clinical addresses and scientific papers. The complete detailed program will be sent you later.

Please mark your calendar now for these dates. The Executive Committee is depending upon every Fellow of the College to do his part in making the Pennsylvania, New Jersey and Delaware Sectional Meeting a success.

Very sincerely yours,

FRANKLIN H. MARTIN,

General Director.

Headquarters and registration at the DuPont-Biltmore Hotel.

Clinics each morning from 8:30 to 10:30 at the hospitals.

Clinical addresses each day from 11:30 a. m. to 12:30 p. m. at the DuPont-Biltmore Hotel.

A conference on the Problems of the Small Hospital from 10:00 a. m. to 12:00 noon on Monday, the 16th, at the DuPont-Biltmore Hotel.

A Hospital Conference for doctors and hospital executives from 2:00 to 4:30 p. m. on Monday, the 16th, at the DuPont-Biltmore Hotel.

A Meeting of the Fellows of the American College of Surgeons at 4:30 p. m. on Monday, the 16th, at the DuPont-Biltmore Hotel.

A Community Health Meeting at 8:00 p. m. on Monday, the 16th.

A Hospital Round Table Conference from 9:00 to 11:00 a. m. on Tuesday, the 17th, at the DuPont-Biltmore Hotel.

Demonstrations in Hospital Standardization at local hospitals from 2:00 to 4:00 p. m. on Tuesday, the 17th.

A Scientific Meeting from 2:00 to 4:30 p. m. on Tuesday, the 17th, at the DuPont-Biltmore Hotel.

Note:—Information concerning the various hospital conferences and scientific meetings can be obtained at the registration desk.

Lay Mirror Reflections

Tribute to Army Medical Corps

(New York Times, Dec. 19, 1927.)

The report by the War Department that the first casualties of the American forces in the World War were sustained by the Medical Corps is another indication of the splendid but often unappreciated part played by that body of men in our army.

The troops of the line too often regarded themselves as on a higher plane than the members of the Medical Corps. This was partly owing to American army tradition which had fostered such a view in the past, and partly owing to the fact that as the men of the medical detachments were not armed they were not such direct participants in battle as the infantry and artillery.

The truth is, of course, that the medical men were exposed to constant danger; that they played their part without flinching; that they were of inestimable help to the men in the line. As a matter of fact the efforts of the thousands of young doctors and internes who joined the army

in the war stand out as among the finest contributions of any section of American life. They deserve more credit than they received during war days.

Injured Motorists Suffer from Excessive Amnesia

(From the Manchester Guardian.)

The Automobile Association appeal to motorists who are injured in accidents to pay the medical men who attend to them on the spot comes none too soon. I know of several doctors whose houses are on or near the Great West road who complain bitterly of the mean treatment they receive from the majority of the damaged motorists to whom they render aid.

It may be the result of shock or mere thoughtlessness on the part of these patients, but it is nevertheless the fact that a large proportion of them pay no fee to the doctor who has been hurriedly summoned and often roused from his bed to attend to the frequent casualties occurring on this particular road.

Case Reports

Acute Mastoiditis, Sinus Thrombosis and Septicemia; Operation; Recovery

Frank J. Coughlin, M. D., New Brunswick, N. J.

J. C., a poorly nourished girl of 12 years, was admitted to Middlesex Hospital, August 22, 1927, complaining of pain in left ear and headache for 2 days. Examination revealed slight amount of tenderness on deep pressure over tip, perforation of tympanic membrane in postero-inferior quadrant, and scant discharge of pus from middle ear. There was no postauricular swelling, no rigidity of neck, no Kernig. Temperature 105°, pulse 120, respirations 26.

The following morning: temperature 100°, pulse 99, respirations 26. Evening temperature 106°. Complete physical examination by consulting pediatricist, Dr. Johnson, showed no evidence of pathology apart from ear condition. Blood count showed: Hemoglobin 90%; color index 1; red cells 4,530,000; white cells 17,250; polys 84; large lymphocytes 3; small lymphocytes 10; transitional 3. Roentgen ray examination revealed: right mastoid clear; left cell outlines indistinct and mastoid cloudy, suggesting congestion; no evidence of exudate; shell thin.

Upon the second day the house surgeon reported an erythematous rash, which appeared on chest, left arm and back, faded on pressure and disappeared altogether in a few hours. This rash occurred on the following, or third day, and remained a similar length of time. The temperature had varied from 99° to 104° until the third day when the discharge from the ear became very profuse, and tenderness quite marked, although there was no postauricular swelling. The rash was taken to be an evidence of septicemic poisoning, the continued high fever and increase in amount of aural discharge pointing very definitely to mastoiditis. Consequently, a simple mastoidectomy was performed. The usual curved postauricular incision was made and pus found welling through the perforated cortex. The cells were broken down, interlaced with pus, throughout.

The aditus, large and filled with granulations, was curetted, and good drainage of antrum secured. The sinus plate was removed over a small area and the sinus found thrombosed. In order to find the extent of thrombosis the original incision was enlarged backward to form a "T" and the sinus opened over 1½ in. of its length. This showed organized clot with no frank bleeding at either end. The clot was curetted away, the sinus packed with gauze and the wound partly closed with 2 S. W. G. sutures. Jugular ligation was not done, as it was thought that the condition of patient did not warrant further operative time.

Blood culture showed *Streptococcus mucosus*. Direct smear from mastoid gave Gram-positive organisms—diplococci—while culture revealed pneumococci and staphylococci. Patient was typed in case transfusion should become necessary.

Temperature remained up, fluctuating between 100° and 104°. Three days after operation the blood picture showed: Red cells 3,570,000; hemoglobin 84%; index 1.2; white cells 12,300; polys 77; large lymph. 6; small lymph. 15; transitional 2. On this, the third day, dressing was changed; wound discharging profusely; packing removed; no bleeding.

The following day—fourth postoperative—patient complained of pain in left knee. There was considerable swelling about the joint and a rise in temperature to 105°. X-ray picture showed no pathology about knee. The leg was immobilized and ice applied, mastoid wound dressed daily and temperature gradually receded although pain and swelling of knee-joint continued for 10 days before movement was possible without pain. X-ray photograph taken at this time showed "ragged looking condition of epiphysis of tuberosity, suggestive of Osgood-Slatter disease".

Dressing was changed daily, gradual knee movements allowed, and child was able to leave hospital September 15, the twentieth day after operation, when knee was completely well and ear wound showed only excess of granulations which yielded promptly to treatment in the office.

Current Events

NEW JERSEY STATE SANITARY ASSOCIATION

Report of Fifty-third Annual Meeting. Held at Princeton, Dec. 2-3, 1927

Charles J. Merrell, Reporter

The Fifty-third Annual Meeting of the New Jersey Sanitary Association was held in the Princeton Inn, Princeton, on December 2 and 3, 1927. The meeting, which was better attended and in which a greater interest was shown than has been the case during the last 3 or 4 years, was called to order by the chairman of the Executive Council, Mr. D. C. Bowen, of Asbury Park, who introduced the President, Chester G. Wigley, C. E., of Atlantic City. Mr. Wigley presided at all the sessions. An address of welcome was given by Mr. B. P. Bunn, Mayor-elect of Princeton.

Papers on the subject of "Preschool Clinics" were presented on Friday afternoon, December 2, by Dr. Julius Levy, Consultant Bureau of Child Hygiene of the New Jersey State Depart-

ment of Health; E. I. Cronk, M. D., Health Officer, New Brunswick; and Harriet W. Van-Derveer, R. N., District Supervisor of Nurses of the State Department of Health at Dover. Dr. Levy also gave an interesting demonstration with a number of children.

On Friday evening the address of the President, on the subject of "Recent Progress in Sanitary Engineering Work in the State of New Jersey", was followed by papers on "Diphtheria" by Dr. William L. Somerset, Chief Diagnostician of the New York City Health Department, and Dr. J. Bennett Morrison, Recording Secretary of the Medical Society of New Jersey.

A paper on "The Relation of the Physician to the Patient from a Public Health Standpoint" was read by Dr. Walt P. Conaway, President of the Medical Society of New Jersey, the discussion of which subject was opened by Dr. A. L. Stone, Director of Public Health, Camden. An address by Dr. Joseph R. Morrow, Superintendent of the Bergen County Hospital, Ridgewood, on "After Effects of Serums on the Human Economy" closed the program for the evening.

At the meeting of the Health Officer's Association of New Jersey on Saturday morning, December 3, which meeting was held in conjunction with the meeting of the New Jersey Sanitary Association, Dr. W. W. Peter, Associate Secretary of the American Public Health Association, submitted a very interesting paper entitled, "Bear North by East". Extracts of these various papers and addresses will later be printed in the Journal.

The following named officers were elected for the coming year: President, B. S. Pollak M. D., Secaucus; First Vice-President, B. H. Obert, Asbury Park; Second Vice-President, H. B. Costill, M. D., Trenton; Third Vice-President, D. C. Bowen, Asbury Park; Secretary, Edward Guion, M. D., Atlantic City; Treasurer, Herbert B. Baldwin, Newark; Chairman Executive Council, Samuel B. English, M. D., Glen Gardner; Member of Executive Council—James E. Brooks, C. E., Glen Ridge; Samuel L. Salasin, M. D., Atlantic City; M. J. Fine, M. D., Newark; Frank J. Osborne, East Orange; Jacob J. Lipman, Ph. D., New Brunswick; W. C. Blake, Princeton; Henry Spence, M. D., Jersey City; A. L. Stone, M. D., Camden; Andrew F. McBride, M. D., Paterson; J. Ralph VanDyne, C. E., Newark; W. W. Brooke, M. D., Bayonne, and George G. Gieger, Trenton.

One of the outstanding features of the meeting was the adoption of the following revised constitution and by-laws changing the name of the Association and introducing various new features in the work of the Association:

Constitution and By-Laws of the New Jersey Public Health and Sanitary Association

CONSTITUTION

Article I. Name

This Association shall be called the New Jersey Public Health and Sanitary Association, called herein the Association.

Article II. Objects

The objects of this Association shall be to advance hygiene, sanitation and health and to disseminate knowledge regarding the same.

First: By promoting investigation of facts and principles relating to personal, domiciliary and public hygiene.

Second: By diffusing information on the laws of health and sanitation and the best means for their application.

Third: By such other influences and agencies as may be deemed expedient.

Article III. Membership

Section 1. There shall be 3 classes of membership: namely, Active, Associate and Honorary Members.

Active Members: Any person professionally engaged in health work in New Jersey may be elected to active membership by a majority vote of the membership committee or at any meeting of the Executive Council.

Associate Members: Any person interested in public health work may be elected to associate membership at any regular meeting of the Association by a majority vote or by the Executive Council at any meeting where a quorum is present: Associate members shall not be entitled to vote or hold office in the Association.

Sustaining Members: Any person or corporation interested in public health work may be elected to sustaining membership by a majority vote of the membership committee.

Honorary Members: Any person who shall be selected by the Executive Council may be elected to honorary membership at any regular meeting of the Association by a majority vote or by the Executive Council at any meeting where a quorum is present. Honorary members shall be selected for distinguished service or special interest in public health work. They shall pay no dues.

Affiliated Associations: Associations which are primarily organized to promote the advancement of health in any of its branches shall be eligible to become affiliated as sections of the New Jersey Public Health and Sanitary Association. Any such association desiring to become affiliated shall submit its application in writing to the Executive Council and upon receiving the approval of a majority vote of said council, such association shall thereupon become affiliated with the New Jersey Public Health and Sanitary Association, provided that at least 10% of the members of the applying association shall be or shall become either active or associated members of the New Jersey Public Health and Sanitary Association and said association shall remain so affiliated until it withdraws, upon due notice received from it, or until it is dropped as an affiliate by a majority vote of the Executive Council after due notice and hearing.

Dues: Each active member of the Association shall pay annually the sum of \$4.00 as a membership fee and each associate member shall pay annually the sum of \$2.00 as a membership fee. Sustaining members shall pay a membership fee of \$50.00 or more and Affiliated Associations shall pay a membership fee of 1% of their yearly budget. These fees shall be paid at the beginning of each calendar year.

Article IV. Officers

Section 1. There shall be a President, 3 Vice-Presidents, Secretary, Treasurer, and the Chairman of the Executive Council.

Section 2. Election of Officers. The officers of the Association and members of the Executive Council shall be nominated by the Executive Council or nominated from the floor by a majority vote of the meeting and elected by written ballots of the members present at the annual meeting of the Association.

Officers and members of the Executive Council shall serve from the close of the annual meeting when elected until the close of the next annual meeting and until their successors are elected.

A majority vote of the Association members present shall be required to elect and if no candidate receives a majority vote on the first ballot, the candidate receiving the smallest number of votes shall be dropped after each ballot in succession until a majority vote is obtained. In case of a tie ballot the President shall cast a deciding vote.

Article V. Executive Council

Section 1. Membership: There shall be an Executive Council composed of the officers of the Association, 15 members at large and the past Presidents of the New Jersey Sanitary Association and New Jersey Public Health and Sanitary Association. Of the total number of the members of Executive Council 9 shall be from the Health Officers' section. The number of representatives from other sections which may be established shall be fixed by the Executive Council at the time of affiliation, such allotment to be added to the membership of the Executive Council. All members of the Executive Council shall be active members of the Association.

Section 2. Quorum: Nine members shall constitute a quorum, a majority of whom shall be members of the Sanitary Association.

Section 3. Duties: The duties of the Council shall be: (a) To direct the administration work of the Association. (b) To act as trustees of Association property. (c) To consider all resolutions submitted at any Council meeting and report to the Association in reference to the same. (d) To recommend names for Honorary Membership. (e) To nominate names for election of officers. (f) To prepare programs for all meetings. (g) To act for and in behalf of the Association in any administrative or legislative capacity between meetings and to report to the Association the result of such action at its next meeting. (h) To establish sections of the Association and to combine or discontinue the same. (i) The Executive Council shall appoint annually a delegate and alternate to represent the Association at the meeting of the American Public Health Association.

Section 4. Vacancies in lists of Officers or Membership of Council: The Executive Council shall have power to fill any vacancies that may occur in its own membership or among the officers specified in Article IV.

The Executive Council shall meet on the evening of the first day of the Annual Meeting, their report to be presented at the next session of the Association, and said Council shall hold a meeting at least once between regular meetings of the Association, at the call of the Chairman of the Council.

Article VI. Meetings

Section 1. All annual meetings as well as other meetings of the Association shall be held at such time and at such places as the Executive Council shall determine.

Section 2. Notices of meetings shall be sent to the members at least 10 days before the time appointed.

Article VII. Amendments

Amendments to Constitution: This Constitution may be altered or amended at any annual

meeting of the Association, after report thereon from the Executive Council, by a three-fourths vote of the members present, provided that any proposed amendment shall have been submitted in writing to the Executive Council for its recommendation at least 30 days prior to said annual meeting.

Article VIII. Committees

Section 1. Committees of the Association shall be appointed by the President unless otherwise ordered by the vote of the Association. The terms of all committees except standing committees shall expire at the end of the next annual meeting unless otherwise specified by the vote of the Association.

Section 2. There shall be the following standing committees, consisting of 3 members appointed by the President (the President and Secretary being ex-officio additional members of such committees): Membership, Legislative, Finance and such other standing committees as may be created by vote of the Association. The 3 appointed members of each of said committees shall be appointed for 1, 2 and 3 years, respectively, and each year the President shall appoint 1 member for 3 years, either as a reappointment or as a new member, in place of the outgoing member of any such committee.

Article IX. Executive Secretary

The Executive Council shall employ an Executive Secretary who shall be editor of the publications of the Association. The salary of the Executive Secretary and his other duties shall be fixed by the Council.

BY-LAWS

Article I. The order of business for the annual meeting as arranged by the Executive Council shall be announced by the Secretary at the beginning of each session.

Article II. The Manual of Parliamentary Rules as generally adopted in this country shall be the rules of this Association, except where otherwise provided for.

Article III. Twenty members shall constitute a quorum at all meetings of the Association.

Article IV. Voting: Only active members of the Association in good standing shall have power to vote at meetings of the Association.

Article V. Good Standing: Members in good standing shall be those who have paid all annual dues or any assessments agreed to by vote of the Association.

Article VI. Members who have failed to pay the annual dues for 2 years, including the current year, shall be so notified by the Secretary and if necessary shall receive a second notice after 30 days. Failing to pay their dues at the expiration of 30 days after the second notice they shall be automatically dropped from membership.

Article VII. The reports of officers of the Association and of all standing or special committees shall be called for by the President at each meeting.

Article VIII. These by-laws may be altered, amended or suspended at any annual meeting of the Association, after report thereon from the Executive Council, by a three-fourths vote of the members present, provided that any proposed amendment shall have been submitted in writing to the Executive Council for its recommendation at least 30 days prior to said annual meeting.

In Lighter Vein

The Obstinate Bivalve

Full many a lad trained to swagger and roister,
Who feels that the world's his particular oyster;
When seizing the shell of the cosmos to whack it
Perceives, in dismay, that it's no cinch to crack it!
—A. L. L.

The Trinity

Nancy was four. Buddie was three. Buddie was crying vehemently and refused to listen to reason.

"All right, then," at last said his sister in exasperation. "Just yell. But remember—God an' the devil an' Santy Claus are all lookin' at you."—Life.

Maternal Solicitude

"I do hope it's nothing but a cigarette cough that ails Betty," said one of our mothers in her anxious way yesterday; and that's another day we never expected to live to see but did.—Ohio State Journal.

Football, and How to Watch It

Football Captain: Can you see the team from your seat?

Alumnus: No, but it's the best place in the stadium for mixing drinks!—Princeton Tiger.

An Eastern college student recently held eight baseballs in one hand. Another triumph for modern education.—Florence (Ala.) Herald.

There are only 20,000,000 automobiles in the United States, but why in thunder do they all get on the same street at the same time?—Shoe and Leather Reporter.

We can't imagine what other nations mean by speaking of "lawless Americans." Haven't we got more laws than all of them combined?—Cincinnati Times-Star.

"Grapefruit Good for the Teeth," says the St. Augustine Record. It's also a frequently used eye tonic.—Tampa Tribune.

Tip for Santa Claus

Salesman—"Something in golf apparel, madam?"

Lady—"I would like to see some handicaps. Large size, please. My husband said that if he'd had a big enough handicap yesterday, ne'd have won the match."—Boston Transcript.

Urgent Engagement

"What is wind, Karl?"

"Wind, teacher, is air in a hurry."—Lustige Kolner Zeitung (Cologne).

Jazzing the Exit

It was a deathbed scene, and the director was not satisfied with the hero's acting.

"Come on," he cried; "put more life in your dying!"—Louisville Stayer.

Football de Luxe

The game will begin at 7 p. m. and is to be played with the aid of moonshine and electric lights.—Boston Globe.

The Woman's Auxiliary

Every new organization encounters difficulties during the formative stage and many experience a more or less prolonged period of tribulation while trying to become properly established. Especially is this true of "service" or "humanitarian" organizations, in contrast to the éclat that so generally attends construction of business groups or a society for money-making. Some of us may be feeling discouragement at the obstacles encountered or the difficulty attendant upon formation and development of the auxiliary to our county medical society; and be inclined to believe that the problem is peculiar to our own specific locality. Let the Editor assure you that the problem is no different in Jersey from what it is in other states, and then let us see if we may not profit by experiences reported from elsewhere.

Despite our efforts from the very beginning, to explain the "why and wherefore" of the auxiliary movement, the question recurs from county after county—"What is there for us to do, and why were we organized?" Anyone who has read the Journal with any degree of regularity—whose attention has been specifically directed to the issue of March, April and June—should know the answer. If you failed to read those copies of the Journal at the time of appearance, turn to your files now and read the articles referred to on page 655 of the November Journal; then complete the performance by reading the Woman's Auxiliary Section of the December issue.

That other states are having experiences similar to our own is patent from even a casual reading of other state society journals. For instance, a report from Jefferson County, Kentucky, contains the following: "Newness of the work made it hard to plan. We found the doctors' wives a busy lot of people and many of them seeing no need for this organization." The Editor would prefer not to say from just how many of the newly organized New Jersey auxiliaries he has heard those two statements. The Kentucky solution is equally worthy of repetition: "We must move slowly but surely to create an interest and a pride in this organization."

Bearing upon the question of "Why an Auxiliary", we should like to quote Dr. Arthur T. McCormack, Editor of the Kentucky Medical Journal, who in an address to the Fourth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association, said: "Every successful organization must have a serious objective, and the objective of the Woman's Auxiliary is to extend the aims of the medical profession—that is, to prevent or ameliorate human suffering. This can be done by individuals and by county and state groups.

For the individual, through personal and family compliance with the profession's advice regarding periodic health examinations. Set a good example for the community.

For the county group, through utilization of such forces as county health officer, women's clubs and parent-teacher associations, for the application of health surveys, establishment of vaccination and immunization clinics for the poor, and promotion of all activities tending to prevent mass sickness.

For the state, through the wider dissemination of knowledge, and education of public opinion regarding constructive health programs."

It would seem that any of us might select from

the above a good and sufficient reason for lending aid and support to this movement.

Now, still considering Kentucky's experience, we find another matter worthy of attention, and differing not at all from one of our own problems. The newly elected President of that State Auxiliary unburdened her soul of the following confession and plea—and we wish every member, particularly every officer, of every auxiliary in New Jersey, to take it to heart: "I want to ask the support of every woman here in keeping this good work going. You know we do not always respond as readily as we should when asked to do something. As an example, we each received a letter, or at least one was mailed to us, asking us to send in medical historical data, and, as you will see by the list, only a very few have done so. When you receive a letter, even though it does not seem of very much importance, please answer it promptly—even if only to say you received it? I am one of many who have failed to reply to letters received, but I have made a resolution not to be guilty again."

From the Michigan State Society Journal we copy the following reason why the physician's wife should become a member of the auxiliary to his county medical society: "I believe that my husband's profession is one of the finest in the world; almost the greatest work a man can do. His profession not only uses all of its knowledge and power to cure disease, but goes farther and does what no other profession will do, that is, work against its own interests in order to help humanity. By that I mean preventive medicine.

I also belong to many other organizations, but I believe that first I should center my interests and energies on the work which is nearest my home and heart, because my position as a doctor's wife surrounds me with opportunities for investigation of the health question and an understanding of that problem which perhaps others may not have. I have discovered through the auxiliary that I may become the friend of any doctor's wife, not only of my state, but of my country, and thus enrich my life."

Report from County Auxiliaries

Atlantic County

Reported by Mrs. E. H. Harvey, Secretary

The meeting of the Woman's Auxiliary to the Atlantic County Medical Society was held at Haddon Hall, December 9.

After the routine business had been disposed of, Dr. H. O. Reik gave us a talk on what other auxiliaries are doing, and offered several suggestions as to bettering the work of the auxiliaries. As these auxiliaries are all in their infancy, we are all open to suggestions which will help us to mature more rapidly.

Election of officers for the ensuing year resulted as follows: President, Mrs. John F. Massey; First Vice-President, Mrs. J. H. Mason; Second Vice-President, Mrs. W. J. Carrington; Recording Secretary, Mrs. Lawrence Wilson; Corresponding Secretary, Mrs. C. B. Kaighn; Treasurer, Mrs. Samuel Winn.

Bergen County

Reported by Mrs. Charles Littwin, Secretary

The fourth meeting of the Bergen County Auxiliary was held Tuesday afternoon, December 12, at Hackensack Hospital. After the transaction of the routine business, which included the pre-

sentation and acceptance of the Constitution and By-Laws, the remainder of the afternoon was devoted to bridge, the proceeds from which went to increase the funds in the treasury.

Cape May County

Reported by Mrs. Aldrich C. Crowe, Secretary

Our auxiliary met at Cape May, Tuesday, December 13, coincident with the meeting of the county medical society. Owing to sparse attendance, election of officers for the coming year was postponed to a special meeting to be held in February, at which time a luncheon will be given and Mrs. E. C. Taneyhill will address the auxiliary upon the question of "Periodic Health Examinations".

One member was appointed from each town that publishes a newspaper, and such member was requested to keep the local paper supplied with publication material taken from Hygeia.

Essex County

Reported by Mrs. George A. Rogers, President

The Essex County Auxiliary held its regular meeting on Monday, November 28. The business meeting was short, so left us time for a sociable afternoon at cards.

The entertainment was arranged by Mrs. Charles Schneider, Chairman of the Program Committee, and Mrs. Richard Brown, of the Hospital Committee, with a most efficient staff of helpers. The occasion brought out a large attendance.

There will be no December meeting on account of the holidays.

On January 23, Mrs. Taneyhill will lecture to us on "Periodic Health Examinations". To this meeting members of outside clubs are being invited so that they may hear, and report to their executive officers the desirability of securing Mrs. Taneyhill for themselves.

This seems to be the best way of reaching the many women's societies which Essex possesses.

I find that members who never looked at the Journal before, now that there is news of the auxiliaries, are on the lookout for its arrival, and read with interest not only that page but much more of its contents. It is as usual the personal touch that holds interest.

I am trying to get more regular items of interest from the various counties, but progress is slow.

With reference to a suggestion for increasing the membership, I should like to say that our membership committee in charge of Mrs. John Huberman is doing very active and systematic work in that direction.

By a well arranged plan, all potential members will be spoken to personally, as well as having received the original invitation to join. Our possible membership is well over 500, so the task is great, but we hope results will justify the means.

Hudson County

Reported by Mrs. Harry Perlberg, Reporter

The November meeting was held at the home of Mrs. John Nevin, of Jersey City, as at present there is no definite meeting place decided upon. The membership is increasing in a gratifying manner, numbering at present 55; the dues being \$3 a year.

Passaic County

Reported by Mrs. George E. Tuers, President

The second meeting of this auxiliary was held at the Health Center Building, Thursday evening, December 8, Mrs. E. J. Marsh, presiding. After an address by Mrs. E. C. Taneyhill, Assistant Educational Secretary of the Medical Society of New Jersey, on "Work Awaiting the Woman's Auxiliary", the Nominating Committee made its report and election of permanent officers took place: President, Mrs. George E. Tuers; Secretary, Mrs. James R. Lomauro.

Salem County

Reported by Mrs. William H. James, Secretary

The Woman's Auxiliary of the Salem County Medical Society met at the Memorial Hospital, Salem, N. J., December 14, 1927, at 2 p. m.

The following officers were elected: President, Mrs. John M. Summerill, Pennsgrove; Vice-President, Mrs. F. H. Church, Salem; Secretary, Mrs. William H. James, Pennsville; Treasurer, Mrs. F. H. Perry, Woodstown.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M. D., Reporter

The regular monthly meeting of the Atlantic County Medical Society was called to order by the President, Dr. Kaighn, Friday evening, December 9, 1927, at 8.30 p. m., at the Chalfonte Hotel, Atlantic City, N. J. Minutes of the previous meeting were read and approved.

Dr. Blair Stewart, reporting for the Public Health and Legislation Committee, proposed that, in view of the closing of Radio Station WHAR, the broadcasting of papers on health matters through station WPG, be combined with the program of the New Jersey State Medical Society. The proposition was adopted and Dr. Henry O. Reik, was appointed by the chair to arrange details.

A letter from Dr. Olin West, Secretary of the American Medical Association, suggested that the Atlantic County Medical Society invite the A. M. A. to meet in Atlantic City in 1929. A motion to extend such an invitation was unanimously approved.

Dr. Blair Stewart spoke at length on "sewerage disposal" in Atlantic City and pointed out that the plant had been brought up to a standard that is entirely satisfactory.

Drs. Samuel Stern and David Allman were appointed as an auditing committee for the accounts of the society for the past year.

The Membership Committee approved of the application of Dr. Maurice Chesler and he was elected to membership. The application of Dr. Manuel J. Malley, D. D. S., for associate membership was turned over to the Board of Censors.

Dr. Samuel Stern spoke of the unsatisfactory treatment he had received from the Knickerbocker Adjustment Service in collecting claims. Other members also testified that this Service had not lived up to agreement. This Service, when first coming to town, was recommended by the Chamber of Commerce, and investigation by the A. M. A. resulted in a report that they were be-

lieved to be reliable. Dr. W. C. Wescott moved that the matter be referred to the Welfare Committee for investigation, and the motion was adopted.

Scientific Program

Dr. Norman E. Titus, of Columbia University, New York City, read a paper on "Diathermy". (To be published in full in the Journal.)

Dr. Edward L. Keyes, New York City, Professor of Urology, Cornell University Medical College, presented some "Observations on Renal Calculi and Silent Stones", saying, in part: "Silent stones are those which, while present, cause no pain. Most people pass a stone at sometime in their lives. Most crystals are passed silently, and their retention may cause symptoms. Treatment of renal colic is first of all the use of morphin, which eases symptoms and, more important, relaxes spasm. The pain is due to stoppage and the resulting distention above the stone. Hot baths and colon irrigations help relax and allow the stone to drop. Stones which do pass, pass silently. Calculous anuria is painless stoppage of urination, due to stoppage of the action of both kidneys; one due to stone and the other to congestion. Patient must be operated upon in emergency before acute retention gets him. Often you must tap the kidney pelvis to save life, with no attempt to recover the stone; later the patient can be x-rayed to find the stone. It is usual for small stones to cause pain, while large ones, because of their immobility, do not give pain." The remainder of the talk was illustrated by x-ray lantern slides.

In discussion, Dr. C. H. de T. Shivers recited several cases of massive stones giving no symptoms and asked Dr. Keyes what method there is for the prevention of the formation of more stones.

Dr. Keyes: Keeping the urine diluted helps prevent the formation of subsequent stones. Diet does not help in this respect. Women do not have bladder stones because they do not have prostate glands to cause retention. Capricol helps prevent prostate stones from forming, but with it you must limit the water intake.

General Staff of Atlantic City Hospital

Joseph H. Marcus, M.D., Secretary

The monthly meeting of the General Staff of the Atlantic City Hospital was held in the Nurses' Auditorium, December 16, 1927, and was called to order at 8.30 p. m. by President William J. C. Carrington.

The scientific program was presented as follows: Diabetes Mellitus with Case Reports, by Dr. Alexander Freed; Case of Typhoid Fever with Unusual Sequels, by Dr. Clarence Whims; Case of Pernicious Anemia with Liver Therapy, by Dr. D. Ward Scanlan; Report of Medical Service, by Dr. Clarence L. Andrews.

Dr. Alexander Freed reported 3 cases of diabetes occurring in patients of various ages, all treated with insulin and balanced diet. Dr. Hilton Read discussed the inadequacy of proper dispensary treatment of diabetic cases due mainly to the laxity of these ambulatory patients in reporting at specific times and in rigidly adhering to routine diet.

Dr. Scanlan emphasized the importance of maintaining these patients in the hospital as long as possible, if proper and successful treatment is to be carried out. Dr. Clarence L. An-

drews, in commenting upon one case, noted that a luetic background was rather interesting and furthermore that the case did not respond to antiluetic treatment.

Dr. Clarence Whims reported a case of typhoid fever in an adult female aged 60, complicated by breast abscess which demonstrated the presence of typhoid bacilli in pure culture and agglutinating 1:100.

Dr. D. Ward Scanlan presented the case of an adult female with pernicious anemia. He outlined the important phases in blood regeneration through liver feeding, stating that the management of pernicious anemia has received a vigorous impetus, particularly through liver therapy, as a result of the observations and experience of Minot and others in Boston, and Whipple at the University of Rochester, who have effectively studied the potential hemoglobin forming capacity of certain diet factors, especially liver. The favorable response and hemoglobin production following liver feeding can be explained on the ground that the liver is concerned with pigment metabolism, and the liver would be the logical storehouse for reserve substances that are readily convertible into hemoglobin. The characteristic features in the case discussed were extreme weakness, marked emaciation, mild delirium, yellowish skin, vague heart symptoms; no definite heart lesions demonstrable, heart sounds very weak, spleen slightly enlarged. Blood examination on admission: erythrocytes, 910,000; leukocytes, 3350; hemoglobin, 18%; color index 1, anisocytosis, poikilocytosis, microblasts and macroblasts. Bile showed normal icterus index; Van den Bergh liver function test normal; Wassermann and Kahn blood tests negative. Treatment consisted exclusively of liver therapy taken 3 times a day with the routine house diet. The calves' liver was prepared by grinding it raw and mixing with cocoa, milk and sugar. Two weeks after admission the red blood cells totaled 1,900,000, with 40% hemoglobin. One month after admission, the red blood cells totaled 2,920,000, with 48% hemoglobin. Patient's general condition was good, showing rapid improvement physically and daily gain in weight.

Liver therapy was discussed by Drs. Carrington, Westcott, Marvel, Jr., and Marcus.

Dr. Clarence L. Andrews reported the medical service for August, September and October, 1927. In his prefatory remarks he extended his appreciative thanks for the unstinted and willing coöperation extended him by the various services, and especially emphasized the invaluable assistance derived from the roentgenographic and laboratory departments. A total of 126 cases were admitted to the service, 68 males and 58 females. Average hospital stay per person was 9 days. Classification of diseases was as follows: cardiovascular, 21; pulmonary, 16; gastro-intestinal, 20; genito-urinary, 6; acute infection, 9; diseases of blood, 5; metabolic diseases, 7; diseases of nervous system, 5; poisoning, 16.

Final disposition of cases was as follows: discharged as cured, 31; discharged as improved, 59; not improved, 4; 12 signed releases requesting discharge. One patient each was transferred to the Municipal Hospital, orthopedic, obstetric and surgical departments, and one to Pine Rest Sanatorium. There were 15 deaths (making a death rate of 12%); 5 patients dying shortly after admission to the hospital.

Dr. Andrews stressed the necessity of the hos-

pital staff's keeping pace with the rapidly growing hospital. (His remarks will appear in full in a future issue of the Journal.)

Discussion of Causes of Deaths

Case 1.—Boy, age 11, was admitted to hospital August 4, in an unconscious state following a brief illness of 2 days duration. Family history negative, except that several male members had been hemophiliacs. Father and mother living and well; 2 brothers living and well. One died at the age of 15 of acute encephalitis shortly before patient's admission to hospital. Present illness began 2 days before admission; shortly after eating some sausage he vomited violently and began complaining of severe headache. Father said vomitus simply shot out without any effort at all. Afterward he became drowsy and fell into what seemed to be a deep sleep. Next morning he could not be aroused, so his father brought him to the hospital in an unconscious state, and our attention was directed immediately toward trying to determine the cause of the coma. Physical examination showed a well nourished boy, breathing loudly, with both eyes turned upward and outward; pupils were equal and reacted to light and accommodation. It was apparent at a glance that the boy was critically ill. Respiration, 30; pulse, 60; temperature subnormal. Heat was immediately applied and an enema given to remove any toxic material; further extensive examination was postponed in the hope of favorable reaction to the application of heat. A spinal puncture was spoken of but as the father said that the child was a bleeder, that seemed to be contra-indicated. His brother had recently died of "sleeping sickness", so naturally we thought of that as a diagnosis. All the routine laboratory tests were asked for, including bleeding and coagulation time, but the patient died in a few hours without rallying at all and before any of the tests could be returned. When reported they showed a leukocytosis of 24,500 polymorphonuclears 90%; coagulation time, 6 minutes, 10 seconds; bleeding time 2 minutes, 10 seconds.

At postmortem the chief interest centered about the brain. Upon opening the skull the dura was greatly congested and the vessels quite engorged. There was a perceptible bulging of the brain, but no outspoken edema or softening; no congestion of the deep vessels. Near the center of the left hemisphere was a large cavity, 4-6 cm. in diameter, which contained a blood clot and broken down brain tissue, but there was no free pus in this cavity. Cultures made from the blood of brain and heart at autopsy were negative.

Conclusions: Inasmuch as this boy was known to be a hemophiliac and had had frequent hemorrhages or purpuric spots over the body, why could not this have been a clot in the brain following some unrecognized trauma, which had undergone sufficient degeneration to cause enough toxic absorption and swelling to cause death?

Case 2.—A negro, aged 75, was admitted to hospital October 10, in deep coma and convulsions involving particularly the whole left side. His mother had died of old age; cause of father's death unknown. Owing to the fact that patient was a British East India subject, was unaccompanied, and in coma most of the time, a lucid history was not obtainable. After repeated attempts during his most relaxed moments, it was learned that he had had rheumatism, but had never had attacks similar to those

he was having now. It could not be ascertained just how long his present illness had lasted.

Physical examination showed a well preserved man, lying in a state of active convulsions which involved the whole left side, particularly the head and neck, with some movements of the left arm and leg. Head was turned toward the left, and eyes rotated in the same direction. Patient did not froth at the mouth nor did he bite his tongue. Respiration 26, pulse 126, temperature 103°. Eyes reacted to light and accommodation; pupils equal. Head negative, except that teeth were in very poor condition. Chest negative, except for slight cardiac enlargement both ways; pulse rapid and somewhat low in tension; abdomen negative, except that the muscles twitched about 10 to the minute.

Chief interest centered about the central nervous system. There was a left sided convulsion of a jerking Jacksonian type, which involved the muscles of the whole side of the neck and face and some of the arm and leg. Reflexes were all increased, particularly on the left. Convulsions were so severe and continuous that chloroform had to be resorted to in allaying them. There were myoclonic spasms of the left arm, abdomen and left leg, about 10 per minute. Upon administration of chloroform patient became relaxed and apparently conscious, but not wholly lucid. He answered questions and said that he was all right. Temperature went up to 106°, and he had a second convulsion. Catheterized specimen of urine showed 200 mg. albumin; innumerable pus cells and 2-3 red blood cells to the high power field. Patient rested fairly well during the night and looked as if he were better, but next morning began to show a constant twitching of the abdominal muscles and those of the left arm and leg. He also seemed to be quite thirsty and asked frequently for water, but did not excrete much urine. Blood count showed 11,200 leukocytes with 81% polymorphonuclears, N. P. N 46, urea 20. A spinal puncture was made and fluid found to be under considerable pressure. Cell count, 28 to field; globulin not increased; no increase in sugar. Colloidal gold curve showed a curve of inflammatory nature. There was no growth from the spinal fluid taken. Moreover, no malaria plasmodia was found in the blood. Wassermann negative. About noon of the same day patient grew rather rapidly worse, developed a severe chill and gradually died.

Postmortem showed the body of a well nourished negro with no external abnormalities. Brain showed some edema but no gross changes. Chest was negative, except for a hypertrophied and dilated heart. Abdomen showed a markedly dilated stomach which was filled with fluid; both the cardiac and pyloric ends presented considerable thickening, with an old indurated ulcer on the greater curvature of the stomach.

Conclusions: In view of the urinary findings (200 mg. albumin, many pus cells and red blood cells), were we dealing with an acute nephritis with resultant one sided cerebral edema and convulsions? If so, why was the patient almost lucid after his convulsions and why did the blood show a N. P. N of 46 and a urea of 20? With an increase in pressure of the spinal fluid, inflammatory colloidal gold curve and myoclonic contractions of abdominal, left arm and leg muscles, were we dealing with a form of encephalitis with secondary anemic symptoms due to slight cerebral edema? Could the combina-

tion of a markedly dilated stomach filled with fluid, with both the cardiac and pyloric ends partially obstructed, together with a hypertrophied and dilated heart, have caused the convulsion and death?

Not one of the above findings seems to answer the whole question. The increase in inter-spinal pressure showed undoubtedly that there was some irritation in the cerebrospinal nervous system and the one sided convulsions suggest it to have been mostly unilateral. The cause of death was probably a combination of all abnormal findings, the acute dilatation of the stomach being the "straw that broke the camel's back".

Case 3.—A negro, age 49, was admitted to hospital September 20, complaining of swelling of ankles and feet. Both parents were dead, cause unknown; no history of any chronic diseases was obtainable. Patient said that he had always enjoyed good health but he must have suffered from more than was found out. Rather a poor history was obtained. Present illness began about 2 months before admission when patient noticed that his hands and ankles were beginning to swell. He also noticed that he passed very little urine. There was no other apparent discomfort. He had been under treatment at the Municipal Hospital for lues and was transferred to us on account of edema and apparent chronic nephritis. Physical examination showed a fairly well nourished negro, lying semiprone in bed; hands and legs greatly swollen; no apparent discomfort except on attempting to move. Eyes reacted sluggishly to light; mouth and teeth in very poor condition due to pyorrhea and intensive treatment. Chest showed fine râles at both bases. Chest wall somewhat edematous; heart sounds feeble and distant; heart dilated both ways. Pulse 96, respiration 20, temperature normal. Abdomen distended and tender on deep pressure; evidence of ascitic fluid in flanks. Extremities greatly swollen; penis and scrotum quite large and edematous. On account of the marked edema fluids were limited to 30 oz., and the eliminative forces brought into play. Blood count was about normal; N. P. N, 210 mg., urea 104, creatinin 3.1 mg. Wassermann negative. Urine showed 1600 mg. albumin with numerous fine and large granular casts. B. P. 104/95. Diagnosis: parenchymatous nephritis. Patient gradually improved for about a week and the albumin came down to 200 mg.; N. P. N., 190; urea, 112. Creatinin, however, went up to 3.2. This showed us that the prognosis was grave. Severe abdominal pains developed, which almost simulated an acute general peritonitis, but we felt that it was a part of the advanced kidney disease. Excretion of urine gradually decreased; patient grew more and more toxic and died in coma on the eleventh day.

Postmortem showed a very large negro, entire body swollen and edematous. All of the serous cavities were also full of fluid. Right pleural cavity contained 2 liters of fluid and the left 1 liter; the pericardial sac contained 50 c.c. Pericardium and left lung showed adhesions to the wall. Heart was greatly enlarged, particularly to the left, and weighed 690 mg. Aorta was greatly enlarged with a relative aortic insufficiency. There was a good deal of free fluid in the abdominal cavity. Liver extended 6 cm. below the costal margin and had a mottled nutmeg appearance. Cecum was in upper right quadrant with the appendix near the gall-bladder; otherwise abdomen was negative. Kidneys

pale, somewhat larger than normal, with adherent capsules.

Impression: The picture is that of cardiovascular renal disease with a parenchymatous type of nephritis. These cases hold back the body liquids more than any other form. A blood chloride estimation in this case would have made our records complete. The chief interest to us here is the great number of serious disturbances the man showed at postmortem and the ease and apparent comfort with which he rested in bed up to within a few days of his death.

Case 4.—A negro, age 27, was admitted August 19, in an irrational state, complaining of pain in the back of the neck. He was from out of town; no one knew him, and he gradually grew worse, so no history was obtainable. He was brought in by the police patrol because of his severe illness.

Examination showed a well nourished male, lying in an irrational state with his hand on the back of his neck, and muttering as if he were attempting to talk to some one. There was a large swelling on the right side of the neck which seemed to involve the cervical glands; neck rigid. Pupils unequal and reacted sluggishly to light; throat negative. Pulse 84, respiration 18, temperature 104°. Lungs negative; heart showed no abnormality; abdomen negative, except for enlargement of the liver. Reflexes active; Kernig sign positive. Chief interest centered about the central nervous system, and a diagnosis of meningitis, possibly tuberculous in nature, was made because of the swollen glands of the neck. A spinal puncture was done and the fluid found to be under great pressure but clear in character. Cell count showed 217 cells per field, 23% of which were polymorphonuclears and 77% small lymphocytes. X-ray of head negative; blood and urine negative; blood urea and creatinin normal; Wassermann negative. Surgical service was consulted concerning the swollen glands, but advised noninterference. Patient gradually grew worse and died on the fourth day of meningitis which we believe extended up through the lymphatics of the neck. There was no postmortem.

Case 5.—A white man, age 53, was admitted to hospital August 18, after having been struck by lightning. The daughter from whom the history was obtained knew nothing about her father's family history. He had had the usual diseases of childhood, but had never been very ill. He used both tobacco and whiskey to excess and worked as fisherman in the bay where frequent exposure to cold was almost a daily routine. While fishing in a boat a thunder storm came up and he was struck by lightning. Those who were in a second boat near by and saw him, said that a ball of fire played about his head and shoulders and he fell down in his boat. They hurried him to the hospital.

Physical examination showed a man lying shackled in bed, constantly turning and tossing about in an extremely nervous state, muttering and talking to himself as if wishing to escape from some impending danger. Entire upper body was quite red, but did not impress one as being badly burnt. Upper layer of the dermis about the shoulder had begun to peel off without leaving any raw surfaces. No scars or burns about the head and face. Eyes reacted sluggishly to light; findings otherwise negative. Lungs showed many fine râles throughout, as in acute edema, but there was no cough nor apparent cardiac distress. Heart not dilated, but

sounds were weak and distant. Pulse, 90; respiration, 24; temperature 98.4°. Abdomen negative; reflexes absent. Aside from his almost frantic nervous state patient did not seem badly injured. Next morning his temperature began to rise, pulse rate to increase and respiration became faster. He soon developed a very acute edema of the lungs which resembled that seen in cardiac failure. This was allayed by atropin and he seemed to be more at ease. All this time, however, he was constantly muttering and could not be kept quiet even with morphin. The peeled areas, which had not impressed us much the day before, now looked raw and like a second degree burn. The sphincters also had relaxed and he was incontinent of urine and feces. He remained in about the same condition until the fourth day when his temperature went up to 104°, respiration 36, and pulse 128. An extreme congestion of the whole chest had developed with beginning consolidation of the bases, particularly the left. On the sixth day the temperature began to fall and the patient looked better. This did not last long, however. The next day it rose again and he died of acute cardiac failure.

At postmortem the upper part of the chest externally showed a burn which resembled a butterfly. The head was not examined. Lungs were markedly congested throughout with beginning lobar pneumonia of left base. Heart presented no gross abnormalities. Liver and spleen were greatly enlarged and congested; kidneys partly congested, but not enlarged. Findings otherwise negative. The chief interest here was the extreme damage done to all parenchymatous organs which did not show up at first, but was the final cause of death.

Case 6.—A white woman, age 29, was admitted to hospital August 13, complaining of headache, weakness, dizziness and dry mouth. Father and mother both dead, cause unknown; one sister in hospital at same time with infectious arthritis. Patient had had the usual childhood diseases—measles, mumps and whooping cough—but otherwise was always quite well and was the mother of several children. Present illness began about 4 days before admission with fatigue, headache and fever; condition gradually grew worse until 3 days later she became delirious. Physician who was called sent her to the hospital.

Physical examination showed a rather obese Italian woman with a dull and listless expression, apparently quite ill. Skin was hot and dry and threw off the peculiar odor of typhoid fever. Temperature 103.8°, pulse 124, respiration 24; tongue and mouth dry and parched; tongue heavily coated. Eyes reacted to light and accommodation. Lungs showed some fine râles throughout and evidence of mild bronchitis; heart rapid and sounds rather poor in quality; abdomen distended; liver and spleen enlarged; peristalsis quite active and bowels tended to move too freely. Blood count: leukocytes 4150, polymorphonuclears 53%; blood chemistry normal. Widal agglutinated B. typhosus 1-320. Temperature for the first 7 days ran almost in a straight line and showed patient to be in the second week of the disease. On the fourth day she passed a bloody stool and temperature fell to 102°, the lowest it had been in several days. She became cold and clammy and pulse went up to 140. A blood count showed 5700 white cells, which was considered not to indicate a severe hemorrhage. Everything by mouth was

stopped; ice bags were applied to the abdomen and opiates given to quiet the bowels. In spite of these measures, patient remained in a state of semidelirium and gradually grew worse during the night; had 2 more hemorrhages. Cheyne Stokes respiration developed and she died on the eighth day.

At postmortem head and chest revealed nothing of importance. Abdomen showed enlarged liver well below costal margin. Spleen was so enlarged, engorged and soft that it tore while being freed from its attachments. Culture from spleen gave *B. typhosus* in pure culture. Cultures from heart and liver were negative. The ileum showed many raw ulcers in the Peyer patches, but no fresh sweeping of blood. Mesenteric glands markedly enlarged. Colon blue, and upon section showed a great deal of clotted blood. In view of these hemorrhages, which stopped before death, did patient die of hemorrhage or from profound toxemia? She was desperately ill, even before the loss of blood occurred. Therefore, the hemorrhage simply added one more hazard which was too much for her to carry. The finding of *B. typhosus* in the spleen shows how quickly these organism leave the blood stream.

Case 7.—A negro, age 40, was admitted September 25, in coma and convulsions. He was brought in by the police patrol and no one came along who knew anything about him. Therefore, a very incomplete history was taken. It was learned that he had been a heavy drinker and it was said that he drank anything that he could get his hands on. Present illness began with a convulsive seizure which lasted for one-half hour, and was so alarming that he was hurried to the hospital.

Physical examination showed a well nourished colored male, unconscious. Pupils dilated but equal, and reacted to light and accommodation. Fine crackles at base of lungs. Heart dilated slightly both ways; no murmurs heard. Abdomen negative, except for slight enlargement of the liver. Extremities showed increased reflexes. The man looked quite ill. Pulse 160, respiration 24, temperature 101.5°, B. P. 155/75. An immediate attempt was made to neutralize what poisons were present both by using alkalis and by increasing elimination. Patient responded somewhat to treatment, and temperature came down to 98.6° but soon started up again. Blood showed secondary anemia; blood urea 22, creatinin 1.95; Wassermann negative; blood sugar 156. Urine showed so much albumin that it coagulated; innumerable large granular casts; large amount of occult blood. Stupor returned, with incontinence, and death occurred on the sixth day.

Impression: This looks like a case of alcoholic poisoning and the patient should not have died. A more heroic administration of alkalis and stronger cardiac support should have been carried out. In spite of the great amount of albumin, the blood chemistry showed that this was not a case of acute nephritis.

Case 8.—A white man, 74 years of age, was admitted August 12, complaining of swollen testicle; he was also intoxicated. Patient was admitted to surgical service where an operation on the testicle was done. He became delirious, due to alcohol withdrawal, so when he was transferred to the medical ward his history could not be taken, but it was apparent from his condition that he had been a free imbiber of alcohol. Two months before admission a small pimple

had developed on the left testicle which soon became swollen and increasingly painful, so he came to the hospital for treatment.

Physical examination showed an emaciated male in a high state of delirium tremens following alcohol withdrawal. He had a saddle nose and was of the dished face type. Pupils were fixed and did not react to light; voice nasal; nose discharging. Lungs showed few râles at bases; heart sounds distant with faint systolic murmur; abdomen negative; testicle red and swollen, showing incisions for drainage recently made by the surgical department. Reflexes were increased. Blood showed secondary anemia; leukocytes 23,100, polymorphonuclears 81%; blood chemistry normal. Wassermann and Kahn both 4 plus. Condition gradually grew worse, delirium increased and patient died on the sixth day after coming to our service. Diagnosis was neurosyphilis, chronic alcoholism and infected testicle. No postmortem.

Case 9.—A woman, aged 34, was admitted August 7, complaining of jaundice, pain in abdomen and dyspnea. Father had died of pneumonia; mother and brother and sisters were living and well. Patient had lived the life of a cabaret singer and dancer and had used alcohol in all its forms. She had also had lues 7 years previously, but was pronounced cured after treatment. Had been operated upon 13 years ago for appendicitis when both tubes were also removed because of infection. Present illness dates back about one year with onset of pain in the abdomen below the umbilicus. This pain gradually grew worse and for the last 3 weeks had been very severe. Patient had not menstruated for 3 months, yet she was not pregnant. About 6 weeks previous to admission she became short of breath, but did not notice that she was jaundiced. Dyspnea grew worse so she came to the hospital.

Physical examination showed a well nourished woman, markedly jaundiced, with red blotches on her face, and severe pain in the abdomen. Head was negative, except that mouth and teeth were in very poor condition; lungs negative, except for slight cough; heart unimportant. Pulse 120, respiration 24, temperature 100°. Abdomen quite distended and tender throughout, particularly in lower quadrant; some edema of the extremities; reflexes active. Abdomen was tapped and 51 oz. yellow fluid removed. This did very little good but it was repeated several times. Other measures proved equally unavailing and patient died on the fourteenth day.

Postmortem showed that all of the serous cavities were filled with fluid. The omentum was adherent to the intestines. There was extravasated blood at the point of puncture. Liver not enlarged but showed marked biliary cirrhosis. Culture of gall-bladder gave pure culture of staphylococcus.

Case 10.—Negro, age 41, was admitted August 26, complaining of dyspnea, pain in chest and expectoration of blood. Father was living and well; mother dead, cause unknown. Several brothers and sisters living and well. Patient had had measles, mumps and whooping cough, but was otherwise well until he served in the U. S. Army. He contracted a cold during his service and had coughed since that time. Present illness began 3 days before admission when he began to cough more severely and began to bring up blood. Says he never did this before. He appealed to the Red Cross and they sent him to the hospital. He coughed incessantly and look-

ed very ill; was also very dyspneic. Temperature 103°, respiration 32, pulse 104. Head was negative, except for poorly kept mouth; lungs flat and expanded poorly. Chief disturbance was found in left lung, particularly at the base, where flatness and fremitus were increased and many râles heard. Some râles were also heard over upper left lung. Diagnosis of lobar pneumonia was made and verified by x-ray examination, with a suggestion of abscess formation about the chronic bronchitis near the hilus. Temperature remained high and patient expectorated a great deal of prune juice sputum. He gradually grew worse and died on the eighth day of streptococcal pneumonia with possible abscess of lungs. There was no postmortem.

Case 11.—White man, aged 66, was admitted to hospital September 14, complaining of weakness and a swelling on his back. This was a case of Dr. Wm. Wescott's, who operated for melanotic sarcoma of the back. Patient developed a general melanotic sarcomatosis and the case was reported before the staff by Dr. McGill last month.

Case 12.—Patient admitted to hospital October 7, unconscious following a cerebral hemorrhage, and died in 2 hours. No postmortem.

Case 13.—Negro, age 40, was admitted September 23, unconscious. An hour before he was brought to the hospital he had drunk something from a glass which produced a severe convulsion. He had told some one he was going to kill himself so the drink was presumed to be poison.

Physical examination showed a well nourished colored male with a peculiar color resembling cyanosis. Pupils were pin-point in size but otherwise negative. Respiration 30, pulse 130, temperature 100°. Reflexes active. Gastric lavage was done and all other measures were carried out, but to no avail. Patient died in less than 24 hours.

Postmortem showed the stomach distended, injected and covered with a mucous coating. It contained about 50 c.c. frothy greenish yellow fluid. Intestines were swollen, red, and showed marked irritation; intestinal wall was 3-4 times normal thickness; mucosa was covered by a thick yellowish gray coat. The substance which the patient took seemed to be a concentrated solution of potassium permanganate. This is not listed as a poison and is often used in lavages and other solutions; if it caused his death he must have taken a great deal. Moreover, the sudden collapse and convulsion following the drinking of the mixture do not fit into a potassium permanganate action.

Case 14.—A white man, age 55, was admitted August 30, complaining of pain in the head. The pertinent facts in his family history were that his father had been found dead and his mother had died of cancer of the uterus. Patient had always been well except for severe frontal headaches for 16 years; says they were always dull in character. Present illness began 2 days before with a severe headache; he was seen by a physician and sent in as a typhoid case.

Physical examination showed a very sick man complaining of great pain in the head; bad cough. Lungs showed a bronchial pneumonia; heart negative, pulse 96, respiration 30, temperature 101°; abdomen full and gaseous; reflexes active; urine negative. Blood showed secondary anemia; leukocytes 11,000; blood chemistry at upper normal. Repeated tests for typhoid were negative. Patient gradually grew worse and died on the fifth day with pneumonia and syphilis. No postmortem.

Case 15.—White man, age 39, was admitted September 14, complaining of swollen glands. He had been admitted to the hospital twice before with Hodgkin's disease; had been a patient of Dr. Walt P. Conaway for years and, with a typical case of Hodgkin's disease of about 2 years duration, came to our service only a few days before death.

Physical examination showed a very emaciated man with all the glands, including the spleen, greatly swollen. He responded twice to arsenic and x-ray therapy and finally died on the fourth day after admission.

At postmortem the chief interest centered about the swollen glands which were found everywhere. The spleen was much smaller than it had been during the disease. Microscopic study of the various glands showed the disease not to be Hodgkin's disease nor malignancy but more in keeping with the picture of Banti's disease.

SUMMARY

In the 15 deaths which occurred during the service we obtained 9 autopsies which explained the cause of death. Case No. 8 showed the great importance of a careful history. Had it been known that patient was a chronic alcoholic something more might have been done for him.

CONCLUSION

1. While 9 autopsies out of 15 deaths is a fair percentage for a community like ours, it is still too small, and further steps toward trying to secure permission for necropsy must be made if we are to improve in diagnosis.

2. One is apt to get the feeling that moribund cases are hopeless and forget that many of these, if heroically treated, can be saved.

3. This report embraces the handling of a group of very interesting cases and could have been of great interest to more doctors and nurses than the few who had the opportunity of seeing them.

4. There is still too much detail work which the chief has to keep check on that rightly should be the duty of the chief resident, and the chief himself be left to handle the important things that need solution.

5. There should be closer contact between the medical and surgical departments, not in respect to consultations but in the matter of each department knowing the work and results of the other department. Only in this way can both continue to grow.

Upon proper motion the meeting adjourned, the meeting of the Major Staff to be called to order ten minutes following.

BERGEN COUNTY

Spencer T. Snedecor, Reporter

The Bergen County Medical Society was honored on Tuesday evening, December 13, by presentation of a paper by Dr. A. E. Jaffin, of Jersey City, on "Diagnosis of Gall-Bladder Disease", illustrated by films and lantern slides, and also by the presence of Dr. Walt P. Conaway, President of the State Society, and Dr. Henry O. Reik, Executive Secretary, who came from Atlantic City to address the men on the activities of the state association and to gain a closer personal acquaintance.

At the opening of the meeting a communication was read by Dr. Clarke, the secretary, from the Holy Name Hospital, extending an invita-

tion to the County Medical Society to attend a special staff meeting which will be held at that hospital on January 11, 1928. Dr. Malcolm McEachern, Director of the American College of Surgeons, and Rev. Charles Moulinier, President of the National Catholic Hospital Association, will address the meeting on Hospital Problems".

New applications for membership include Dr. Thomas F. Connor, of Bogota, proposed by Drs. Edwards and Trossback, and Dr. P. D. Westerhoff of Midland Park, proposed by Drs. Fisher and Parsales. In regular form Dr. Cleveland Cochrane, of Closter, and Dr. Prout, of W. Englewood, were elected to membership. The treasurer reported that the dues for the year 1928 will be \$15.00. No report from the Building Committee.

The Nominating Committee presented the following list of names as officers for the ensuing year: President, Dr. F. C. McCormick, of Englewood; Vice-President, Dr. George M. Levitas, of Westwood; Secretary, Dr. E. W. Clarke, of W. Englewood; Treasurer, Dr. Michael Sarla, of Hackensack; Reporter, Dr. S. T. Snedecor, of Hackensack; for Member of State Society Nominating Committee, Dr. J. Finley Bell, of Englewood; Annual Delegates, Drs. J. Finley Bell, R. E. Knapp and E. W. Clarke.

Dr. A. E. Jaffin, Attending Physician at the Jersey City Hospital, gave a most instructive talk on the diagnosis of gall-bladder disease. At the beginning he explained that he was not speaking of the clear cut acute cholecystitis but of the chronic types in which differential diagnosis between gastric and duodenal ulcer, chronic appendicitis and constipation makes it a difficult problem. Other diseases which sometimes cause confusion in our diagnosis are colitis of the spastic constipation type and cardiac lesions with coronary disease. In particular, Dr. Jaffin emphasized the value of cholecystography.

The physical signs of gall-bladder disease are: spasm of the right rectus muscle, localized tenderness over the gall-bladder region, possibly a palpable mass; and there is little else to aid us from examination or laboratory tests. Gastric analysis has been discarded as of no value; testing with Lyons duodenal tube does not seem worth while. The errors are too frequently misleading and unreliable. Direct x-rays rarely show up the stones but are always worth trying. Therefore, an additional aid to our diagnostic methods which would tell us in over 95% of the cases whether gall-bladder disease exists is of great value to us. Such an agent is cholecystography. Dr. Jaffin reported on a series of 55 cases analyzed by him for gall-bladder disease. Of these, 15 were shown by the dye to have positive trouble; 7 of these were operated upon and the diagnosis confirmed; 5 of them had gall-stones. In all the positive cases the history and physical examination bore out the cholecystography diagnosis.

The technic for the pictures is as follows: First a direct radiogram without the dye is taken; secondly, 12 hr. after administration of the dye by mouth (intravenous method unnecessary) a second picture is taken to see if the gall-bladder is filled with the dye and if the presence of stones in the gall-bladder causes a defect in the homogeneity of the gall-bladder shadow. A third picture may be taken an hour or two later to eliminate the juxtaposition of gas bubbles. Thirdly, a fatty meal is given at 16 hr. and, 1 hr. later, another plate is taken. The normal sac should have discharged the dye

and no shadow will be left. Graham, of Boston, reports on a series of 1246 cases in which 147 gall-bladders were removed and diagnosis was proved to be correct in 143, an average of 97%.

Dr. Jaffin then showed a long series of slides and radiographs of his cases illustrating the normal gall-bladder, the dye in a normal gall-bladder, the dye in a gall-bladder with stones and the dye remaining after a fatty meal which should have caused it to evacuate. Dr. Jaffin incidentally stated that he felt there was no need of preliminary catharsis. In conclusion, he emphasized the apparent value of the test in a disease which is difficult to diagnose, and the ease and simplicity of carrying it out with moderately careful technic.

In the discussion, Dr. J. B. Edwards, of Leonia, stated that he felt that results of this method were still on trial. While the filling of the gall-bladder with the dye was of great value in giving the outlines of stones he did not feel that the absence of filling of the gall-bladder with the dye proved that the condition was pathologic. Many other things might prevent such filling.

Dr. George Finke spoke of a recent autopsy on a case of cardiac disease in which gall-stones were found. He emphasized the fact that not all pains in the right upper quadrant are from gall-bladder disease.

Dr. Bell spoke of a case of coincident gall-bladder disease and appendicitis.

Dr. Jaffin concluded his talk by saying that he felt that the burden of proof of diagnosis when cholecystography indicated a normal organ was up to the operator.

Dr. Conaway spoke on the State Society program for the year. In obtaining group insurance for malpractice, accident and health, automobile, fire, theft and indemnity at a much lower rate than any of the standard policies, he feels that the State Society has done a distinct service to the doctors. He urged everyone to take advantage of these lower premium rates. The policies are absolutely standard, in a high grade company, with a reduction of 20%. Dr. Frank W. Pinneo, of Newark, will be glad to supply any details.

Special plans are being made for the June meeting this year which will be held June 6 to 9. Records of the attendance at other state society meetings shows that at an average of about 15% of the doctors attend. It is hoped this year, by rearranging the program and putting the business meeting Wednesday, filling the following 2 days with symposia, special sections on eye, ear, nose and throat and pediatrics; along with general talks by leaders of note in the profession; Saturday morning clinics at the Atlantic City Hospital in all branches of medicine; we should draw forth a greater number of physicians this year.

Dr. Conaway also explained progress of the antidiphtheria campaign. At the instigation of the State Society, Governor Moore called a meeting of all the Welfare Associations of Jersey last June and an antidiphtheria campaign was laid out. It now requires the support of every county society to join in actively making it a success. The Welfare Committee of the State Society is always active.

Dr. Reik described the last issue of the Journal and its contents. The December Journal is the largest one ever published and contains many features that should be of interest to every member of the profession. The reports of the Wel-

fare Committee are now being printed as soon as rendered. The Tristate Conference inaugurated by New Jersey has proven to be a great success. The New England States have organized similar conferences and other state groups are considering the plan. At the December meeting the subject for discussion was "State Control of Private Hospitals" and the leading paper was presented by Dr. Morrison. The educational program is going forward constantly. Talks are being given at every opportunity, at Rotary meetings, Kiwanis, High Schools, etc. Periodic health examinations are being emphasized. Dr. Reik's assistant, Mrs. E. C. Taneyhill, is speaking before the Women's Clubs throughout the state. A new series of primers has been run off to supply the popular demand. Radio talks are given every Wednesday night from 8:45 to 9:00 from Station WPG. December 22, the talks will be "How Are You?" by Mrs. Taneyhill; December 28 Dr. Conaway will deliver a "New Year's Message". Thereafter every week ten minute talks will be given on topics of preventive medicine. Any member may present such a talk. Copies of manuscript should be submitted to Dr. Reik, who will also send them to the newspapers throughout the state for publication. Dr. Reik urged the members of county societies to back up the anti-diphtheria campaign in every possible way and suggested a motion for the support of the movement, which was later formulated and adopted unanimously. Of the Women's Auxiliaries to County Medical Societies of the state, 16 are already organized and 2 about to organize. The danger at the present moment is that this worthy movement may die out from inertia. It is up to the county societies to suggest an active program for them. In particular, Bergen County might well get them to support the movement for a home for the county society. Dr. Reik concluded by an appeal for papers to be presented at the June meeting. Titles of such papers should be sent in at once to Dr. R. K. Holmsted, of Westville.

CAMDEN COUNTY

R. E. Schall, M. D., Reporter

The regular meeting of the Camden County Medical Society, December 3, was presided over by Dr. T. W. Madden. Minutes of the previous meeting were read and approved.

The following named physicians were elected to membership: H. W. Marcarian, Albert S. Shaefer, and Mabel C. S. Haines.

Among the visitors were: Drs. J. Bennett Morrison, of Newark, N. J., and John Joseph Gilbrial, of Philadelphia.

Dr. Morrison, Recording Secretary of the Medical Society of New Jersey, addressed the meeting upon various topics of interest to members of the state society. He expressed approval of the plan to secure annual registration of all physicians practicing in New Jersey. This method has been adopted now in 17 states and is designed in part to supply each physician with a printed list of all physicians who are licensed to practice within the state; a fact which will of itself help toward elimination of unlicensed physicians and the members of the various cults who profess to treat disease conditions.

Dr. Morrison thinks each county society should devote at least 1 meeting a year to consideration of medical economics. He called attention to the

fact that lay health organizations are asking for professional help and stated the belief that if we do not cooperate and furnish them with the needed assistance, they will seek it from other sources. He called upon all physicians to participate in the statewide Antidiphtheria Campaign which was started by the state medical society, sponsored by Governor Moore through a public meeting at the State House, and has been promised the support of many welfare organizations.

Dr. Morrison directed attention to the discussion in the December Journal on the control of private hospitals and stated that he had received many complaints concerning such institutions in New Jersey. The larger hospitals are chartered and their books open for inspection but the smaller private hospitals have no proper supervision. Private hospitals are a necessity in many localities but they should be under some sort of control.

Taking up the scientific program, Dr. Percival Nicholson read a paper on the use of "Ultra-violet Rays in the Treatment of Children". He pointed out the fact that rickets can be cured or the cure greatly hastened by ultra-violet rays and that they are also useful in the treatment of lymphangitis.

"The Use and Misuse of Ultra-violet Therapy" was presented by Dr. E. G. Hummel. He stated that tubercle bacilli can be killed by these rays and that rickets can be cured by the combined use of ultra-violet rays with administration of calcium. He exhibited lantern slides to show bone changes before and after such treatment.

Dr. Vincent Del Duca spoke on "Enlarged Thymus" He described how the gland increases in weight up to puberty and then begins to diminish. It functions in childhood as a lymphoid gland, and he stated that about 8% of children have status lymphaticus, though this enlarged thymus may be symptomless. Hyperplasia of the thymus gland causes trouble by disturbance of the endocrines and by pressure upon the trachea, causing dyspnea and cardiac disturbance. Suffocation may come on suddenly, with stridor, or noisy breathing. Stenosis of the trachea has been observed through the tracheoscope. X-rays afford the best means of treatment because they destroy lymphoid tissue and produce an increase of fibrous tissue.

Dr. Joseph Roberts said in discussion that when the thymus is absent the child often becomes sluggish, irregular in habits, and exhibits mental disturbances. It is not known whether this gland has a physiologic secretion. Enlarged thymus is more common in males than in females—about 6 to 1—and enlarged tonsils and adenoids are commonly observed in these same children. Sudden death may result from slight causes with a condition of status lymphaticus.

Dr. Goldstein called attention to a new vaccine brought out in central Europe, thymolysen, for use in such cases.

IN MEMORY OF WILLIAM A. WESCOTT, M.D.

There are occasions in the life of our society, when we turn from the turmoils of professional duties, to behold the work of the reaper, Death; there are periods, when sadness, like a tidal wave sweeps over our society with resistless force; there are times of solemnity, when language cannot express the emotions of the soul.

Dr. William A. Wescott is dead; he passed away July 19, 1927, at his home in Berlin, N. J., at the age of 69 years. He was the youngest child

of John and Catherine Wescott, and was a brother of the Hon. Ex-Judge John W. Wescott who died about 6 weeks previously. Dr. Wescott is survived by his widow, Mrs. Elizabeth Shaw Wescott; a sister, Mrs. Ella W. Fisher, of Montclair, and 5 nephews.

As a young man Dr. Wescott was very fond of all the outdoor sports, baseball, football, swimming, horse racing and boxing; frequently gave boxing lessons and I understand was quite clever in the art himself. His early education was obtained in our country's greatest institution, our common schools, afterward entering the Russell Military Academy, New Haven, Conn., where he took a 3 year course, preparatory to entering Jefferson Medical College; graduating with honors in 1883.

After a postgraduate course at the Pennsylvania School of Anatomy and Surgery, he served 4 years at the Pennsylvania Hospital and was out door physician at the Philadelphia Lying-in Hospital. He also took a course in skin diseases at the Philadelphia Hospital under Dr. Shoemaker.

Dr. Wescott was pleased to be called "just a country doctor" and practiced in Berlin all his life. He was a member of the Camden City and Camden County Medical Societies and served as president of the latter society in 1899; during his term as president, I might say incidentally, he prevailed upon me and was instrumental in causing me to become a member of this society, and, allow me to add, I have never regretted it. He was a prominent member of the New Jersey State Medical Society, also a member of the American Medical Association and, at the time of his death was one of 8 physicians holding a special health officer's license in Camden County. He was a life delegate to the New Jersey State Medical Society, a life member of the Philadelphia Medical Club, and a member of the Alumni Society of Jefferson Medical College.

During the World War he was a member of the Volunter Medical Corps; he was medical inspector of schools both of Waterford and Voorhees Townships for a number of years, up to the time of his death; he was active in our town and county affairs and was mainly instrumental in establishing the first Building and Loan Association in our community, becoming its first president, which office he held for a number of years. He was until recently very active in his chosen field of labor; active in teaching preventive medicine; and he built up a reputation for simple, honest performance of duty which all of us may well emulate. His passing from life was that of a man who had performed his full duty upon the earth.

His heart was full of human sympathy, red blooded sympathy that tends to lift up a man who has fallen down, sympathy that speaks the light of new hope into one's soul; his was a life of usefulness in the community in which he lived, for he was good to the poor; I have personally known him to go about at Yuletide, among the poor, especially the poor children, distributing food and things to make them have a happy Christmas. Sacrifice—the sacrifices of the servants of humanity that have through the ages made music in the souls of men; it is said he who would take sacrifice out of human life would steal from maternity its sacred sweetness and obliterate the stripes of red in our national flag.

The last few years Dr. Wescott had been sought after as a public speaker; he was a humorous and vivid narrator, and I remember that he was the main speaker at the dedication of one of

our National Banks a few years ago; he was also sought after as a drawing card to speak at lawn fêtes, church suppers and so on. He was a close student of the poets, and loved to quote our Walt Whitman's definition of death, namely, "What is universal cannot be an evil".

I knew Dr. Wescott probably better than any physician in this society; he was my neighbor for more than 30 years. I knew a side of him that few people knew, and that is that he was a Bible student of no mean ability—a few years ago he had read the Bible through twice.

A few months ago Dr. Wescott was in the vigor of health; disease seized upon him; he sickened and died. Such is the weakness of human life; health, energy, power yesterday—death today.

The grave is not the end. If I were to write the epitaph of our fellow physician Dr. Wescott, I would chisel upon the shaft that stands above his mortal remains the words: "Here lies the body of a man who has toiled and sacrificed his life for the betterment of humanity, and who among us can say his chances of light and life beyond the grave are not secure and will not bring to him, the acclaim, 'well done, good and faithful servant'".

WILLIAM C. RAUGHLEY, M. D.

CAPE MAY COUNTY

Eugene Way, M.D., Reporter

The annual meeting of the Cape May County Medical Society was held Tuesday in the Focermecray Building, Cape May. The meeting was presided over by Dr. G. F. Dandois of Wildwood. This was an unusually instructive gathering with physicians present such as Dr. Clarence Way of Sea Isle, Dr. J. Hunter of Westville, Dr. Diverty of Woodbury, and Dr. Frank R. Hughes of Cape May, addressing the assemblage.

Dr. Clarence Way talked upon the hospital situation, while Dr. Frank R. Hughes discussed the "Changing Aspects of the Practice of Medicine in Our Community".

The future of the Cape May County Medical Society was pictured for the doctors by Dr. Herschel Pettit, and Dr. A. C. Crowe spoke on Medical Clubs. Dr. H. H. Tomlin told about the financing of the society. In addition to the talks of the Cape May County physicians, Dr. James Hunter of Westville, past president of the State Medical Society, and Dr. Diverty, president of the State Medical Board Examiners, the visiting physicians, gave animated and educational talks.

Dr. Hunter said that the establishment of a hospital at Sea Isle was a wonderful step forward for that community. He deplored the fact that physicians were often called from their beds to attend victims of automobile accidents that occurred mostly between midnight and 5 a. m., and were caused by drunken or careless drivers; that these people not only disturbed the doctor's sleep, tracked up his office with blood and grease, accepted his supplies and attendance, but also neglected to pay the bill. He added that hospitals were the place where such injured people should be treated.

Dr. Mace, of Wildwood, heartily concurred with Dr. Hunter. Dr. Mace probably handles more automobile accident victims than any other doctor in the county. She has had a special addition to her hospital in that city built, so that early morning patients will not disturb the rest of her hospital household. Dr. Mace said that almost without fail it was necessary to go to court in

order to collect her bills from these patients and that very often, when the court had ordered them paid it was necessary to institute suit to settle it finally. In July she had attended 148 accident patients, in August 168 and in September 89. From September until January there had been 114 such patients. These, she reported, were brought in from all over the county, one-third of them after midnight. She added that she was conducting a hospital and kept an open door for all cases that were neither contagious nor insane. She has recently added 4 new rooms for cases that were considered suspicious as to contagion.

Drs. Crowe, Tomlin and Haines were appointed to the budget committee for the year 1928.

The officers elected for the coming term will be: President, Dr. H. Pettit of Ocean City; Vice-President, Dr. Randolph Marshall, Tuckahoe; Secretary-Reporter, Eugene Way, Sea Isle City; Treasurer, H. H. Tomlin, Wildwood; Censor for 3 year term, Colonel C. M. Gandy, Ocean View; Delegate to the State Medical Society, Dr. Aldrich Crowe, Ocean City; Alternate, Dr. Marcia Smith, Ocean City; Member Nominating Committee State Society, C. W. Way, Sea Isle.

Dr. Diverty, of Woodbury, who was born in Cape May County, but has practiced in Woodbury for more than 40 years, spoke to the assemblage upon the importance of having an "annual registration", the funds from which would be used in the prosecution of illegal practitioners. It was here learned that in this county, if a practicing physician is considered dubious, it is possible to phone Court House to see if a copy of his certificate is filed there. If it is not, it is simply a question of communicating with the police who will do the rest.

Following the business meeting a luncheon was served in the banquet hall at one o'clock, in which the auxiliary of this society, Mrs. Dan-
dois, president, participated.

ESSEX COUNTY

John J. Connolly, M.D., Reporter

The regular meeting of the Essex County Medical Society was held at the Academy of Medicine, Thursday evening, December 8, with Dr. Richard N. Connolly, Vice-President, presiding.

Reading of minutes of the previous meeting was dispensed with.

Dr. Henry O. Reik, Editor of the State Medical Society Journal, addressed the society and during his remarks encouraged: (1) Periodic health examinations. (2) Carrying the public educational programs of the state society to the various women's organizations. (3) Support of the Women's Auxiliary which has been organized in 16 of our counties. He also informed us that talks on preventive medicine are being broadcast every Wednesday evening at 8:45 o'clock from Station WPG, Atlantic City. These talks are mimeographed and sent to the various newspapers of the state for coincident publication. Preparations are being made for the next annual meeting of the state society, at Atlantic City, from Wednesday, June 6 to Saturday, June 9. Wednesday will be given over entirely to meetings of the House of Delegates. The Women's Auxiliary will also convene at Atlantic City during the same days.

Dr. Pinneo stated that the council of the Essex County Society recommended revision of the constitution and by-laws of the society; also

that new members entering the society may either pay their dues at the time of their election and immediately be registered as members or else defer their payment until the following January when they will be enrolled for the new year.

In view of the continued discussion on "annual registration", Dr. H. C. Barkhorn moved that the action taken by the Essex County Medical Society at the October meeting be re-affirmed. This was seconded by Dr. Bassett, and the motion passed.

The following new members were elected: Julius Bernstein, Edward A. Bogdan, William J. Bull, John J. Connolly, Samuel C. Dowds, M. E. W. George, Leo Y. Granger, Charles F. Lehlbach, U. S. Spinning Board, N. Y. C.; Irving J. Lehman, Charles A. Minnefor, Alexander E. Nash, William Nyiri, I. L. Rettig, Jerome H. Samuel, Merton H. Stevens.

Anatomic and Pathologic Society.

The Essex County Anatomic and Pathologic Society held its annual meeting Thursday evening, December 15, at the Academy of Medicine.

The following officers for the ensuing year were elected:

President, Jean F. Wolfs; Vice-President, George Olcott; Secretary, Raymond P. Mullin; Treasurer, Edwin Steiner. Dr. Sidney Keller was appointed to fill a vacancy on the Board of Governors.

Dr. Albert Epstein, of New York, delivered an exceedingly interesting dissertation on "The Nephroses".

Section on Obstetrics and Gynecology

Walter B. Mount, M.D., Chairman

The stated meeting of the Academy of Medicine of Northern New Jersey was held October 19, 1927, at the Academy, under the auspices of the Section on Obstetrics and Gynecology.

Dr. Donald Macomber, of Boston, Research Fellow in Obstetrics at the Harvard Medical School, read an illuminating paper entitled, "Diet and Fertility", illustrated by lantern slides. The question was taken up from the standpoint of the experience of animal breeders, from laboratory work on animals, from a few careful observations on groups of boys and men, and from the speaker's own practical experience.

The paper was discussed by Drs. Robert L. Dickson, of New York; Isador C. Rubin, of New York; Girard L. Moench, of New York; Edward J. Ill, of Newark, and Elmer G. Wherry, of Newark.

Section on Obstetrics and Gynecology

Walter B. Mount, M.D., Chairman

The regular meeting of the Section on Obstetrics and Gynecology of the Academy of Medicine of Northern New Jersey was held December 8, 1927, at the Academy in Newark. Attendance good.

Dr. Lewis S. Herndon read a paper on "Ureteral Strictures", illustrated by lantern slides. This paper was discussed by Drs. Edward J. Ill, Edgar A. Ill and Benjamin A. Furman.

Dr. Albert S. Harden read a paper entitled "A Review of Some of the European Clinics", which will be published in the Journal.

GLOUCESTER COUNTY

Henry B. Diverty, M.D., Reporter

The Gloucester County Medical Society met Tuesday afternoon, November 22, as guests of Dr. Wendell J. Burkett, at the Pitman Golf Club. The following physicians were present: Black, of Clarksboro; Duffield, of Glassboro; Phillips and Knight, of Pitman; Fisler, of Clayton; Ashcraft, of Mullica Hill; Downs, Buzby and Livinwood, of Swedesboro; Wood and Sinexon, of Paulsboro; Stout, of Wenonah; Hollinshed and Hunter, of Westville; Campbell, Underwood, Pegau, Lee, Diverty, of Woodbury; Hillegass, of Mantua. Drs. Richardson and Casselman, of Camden; Dr. Gilbride, of Philadelphia; Dr. Lloyd, of Bridgeton; and Dr. Reik, of Atlantic City, Editor of the State Medical Journal, were also present.

Being the annual meeting of the society, the following officers and committees were elected: President, Benjamin Buzby; Vice-President H. L. Sinexon; Secretary and Treasurer, R. K. Hollinshed; Reporter, H. B. Diverty; Board of Censors, Hunter, Campbell and Phillips; Delegate to the New Jersey State Medical Society, Wood; Alternates, Downs and Buzby; Delegates to Cape May County Medical Society, Hunter and Diverty; Delegates to Camden County Medical Society, Hollinshed, Hunter and Diverty; Delegates to Cumberland County Medical Society, Underwood, Lee and Ashcraft; Delegates to Salem County Medical Society, Ashcraft, Downs and Stout; Delegates to Burlington County Medical Society, Hunter, Buzby and Black; Delegates to Atlantic County Medical Society, Burkett, Diverty and Duffield; New Jersey State Nominating Committee, Hunter; Program Committee, President Buzby. Secretary Hollinshed and Diverty; Board of Trustees, Underwood, Campbell and Duffield.

Following the election, a very profitable afternoon was spent listening to Dr. John Kolmer, of Philadelphia, and Dr. A. J. Casselman, of Camden, who spoke of the "Diagnosis and Treatment of Syphilis". Both of the addresses were very much appreciated by the society, and a hearty vote of thanks was extended the speakers.

Dr. Reik addressed the meeting during the dinner, reporting on the progress of state society work.

Following this, quite an elaborate dinner, which had been arranged for by Dr. Burkett, the host, was enjoyed, and a rising vote of thanks was given to Dr. Burkett for his royal entertainment.

December Meeting

The Gloucester County Medical Society met at the Woodbury Country Club, on Thursday, December 15, 1927, at 1.30 p. m. with President B. F. Buzby in the chair.

The Secretary requested payment of annual dues promptly in order to make proper returns to the State Society. The subject of an "annual registration" of physicians of the state was taken up and discussed. Dr. Hunter stated that the object of this registration was to enable the Board of Medical Examiners to secure a complete registry of all legally qualified physicians within the state; to furnish a copy of this list to every physician in the state; and, finally, to give to the Medical Examining Board funds for the prompt and proper prosecution of all illegal practitioners. Pennsylvania and New York states have adopted such registration, resulting in driving out their illegal practitioners, who are now swarming into New Jersey and opening

up offices. There are a thousand or more illegal practitioners within the state at the present time, and with funds necessary for their prosecution at the disposal of the Medical Examining Board, they could be promptly closed out. On motion of Dr. Hunter, the society approved of the annual registration of physicians by the state.

Delegates to the Cape May and Camden County Societies, reported attendance upon the meetings of these societies held on December 13, 1927. The Cape May Society, at the suggestion of its President, devoted the meeting to medical economics. The meeting was well attended, proved most profitable, and was followed by a dinner.

Camden County Society meeting was also well attended and profitable to all present. Following the reports of delegates, the Board of Censors reported favorably upon the application of Dr. Harrington and upon motion of Dr. Hollinshed, Dr. Harrington was unanimously elected to membership in the Gloucester County Society.

The following program was then put through: Dr. Richard Kern, Philadelphia, Pa., "Asthma". Dr. J. Harris Underwood, Woodbury, N. J., "A Case of Thymic Death". Dr. Pegau, Woodbury, N. J., "Pediatric Case". Dr. Harrington, Woodbury, N. J., "Eclampsia". The topics mentioned were presented by the speakers in an attractive and interesting manner, furnishing to those present good clinical material gleaned from experience in daily work.

The Essay Committee of our society has always felt that the most valuable material brought to the society is from men who come and talk to us from a ripe clinical experience in an informative way, and who seldom use the formal typewritten essay. Talks of this type are most helpful to the men in general practice in the rural communities, but much of its helpfulness is lost through our lack of proper recording facilities. We are now trying out the experiment of employing a medical stenographer to take these talks, thus enabling us to review during our leisure the subjects brought to us by this type of speaker. We feel that we will profit by so doing, gaining clearer concepts of such points as may be of value to us in our daily work, to say nothing of the value of broadcasting such practical talks through our Journal. We have learned through experience to realize that it is useless to employ an ordinary stenographer for this type of work, as their lack of knowledge of medical nomenclature impairs the character of their work for medical use. Dr. Diverty, our very able reporter, as well as chairman of the Essay Committee, starts on a "World Tour" January 7, 1928. We will miss his reports of our meetings, but we hope to make amends by the use of our medical stenographic notes.

The meeting was followed by a dinner, during which much favorable comment was forthcoming upon the success of President Buzby's plan of having both out-of-town and local talent upon the programs of the society during his term as President.

HUDSON COUNTY

M. I. Marshak, M.D., Reporter

The Hudson County Medical Society met at the Carteret Club, Jersey City, December 6, with Dr. S. R. Woodruff presiding.

Dr. Ross McPherson, of New York City, gave a talk on "Obstetrical Analgesia". He enumerated

the various methods used and stated that as he grew older in practice, his enthusiasm for the different methods waned. Chloroform, he dismissed with the remark that it was dangerous to use and produced lesions in the liver akin to those produced by the toxemias of pregnancy. As for ethylene, it was liable to explode when least expected and increased the likelihood of hemorrhage; the main advantage of this gas being the rapidity with which anesthesia comes on and the speed of recovery from its effects. There was no perceptible increase in mortality of mother or child in his use of scopolamin and morphin (twilight sleep) but the babies were born apneic. To use these drugs satisfactorily meant a very tedious job as they must be used early and given constantly throughout the labor. This method should only be used during the first stage of labor and is especially applicable in cardiac cases.

Rectal analgesia, the so-called synergistic method, was first used at the Lying-In-Hospital, New York City. In the beginning, the procedure was rather crude until a satisfactory formula was worked out. Reports show that 85% of 5800 cases in which this method was used gave satisfactory results. Dr. McPherson criticized the reported results because the figures were based on reports of the house officers and nurses and not from personal observation of the obstetricians. Rectal analgesia is not a panacea and one must be able to judge the results frankly and in a not too enthusiastic manner. The woman should be in active labor, at least 2½ fingers dilated, with pains well established and no pelvic disproportion. An injection of 2 c.c. of a 50% magnesia sulphate solution is given, followed in half an hour by ¼ gr. morphin. At the end of 1½ hours, if the patient is coming out of her stupor, the magnesia sulphate solution may be repeated. The rectal injection consists of 20 gr. quinin in 40 minims of alcohol, with 2½ oz. ether and 2 oz. olive oil. As a precaution against burning by excretions the buttocks should be well greased. After cleansing the rectum with a soap enema, a little warm olive oil is injected through a 22 Fr. catheter, then the rest of the mixture followed by more olive oil. One should inject rather slowly, about 15 minutes being allowed for the procedure. The patient goes to sleep in a short time but pains continue. Some patients develop restlessness while others even have a maniacal attack, but if everything goes well, it is quite beautiful. There has been no mortality among either the mothers or children. The main drawback is development of restlessness or mania and inability to stop the analgesia at will. On the whole, one can say that it is a valuable addition to our armamentarium.

The most satisfactory way of conducting an average case for analgesia was then described. Allow the first stage of labor to go on until the patient is fussy, then give a small dose of morphin. When the uterus is fully dilated and labor has progressed well, start gas oxygen; 3 or 4 whiffs of gas are given with each contraction of the uterus and as soon as the patient is ready for delivery, a mild ether anesthesia is induced and pushed as the child is delivered. It is not wise to use one method in all cases but the various types of analgesia should be used appropriately.

Drs. Cosgrove, A. C. Forman, Quigley, Binder, Friele and Reik took part in the discussion.

Dr. Reik, Executive Secretary of the State Society, spoke of the increasing size of the Journal and commented on the quantity and the scientific value of the papers submitted for publication. He made a plea for reports of the clinical meetings of the various hospital staffs and the smaller med-

ical societies. He also spoke of the increased activities of the Women's Auxiliaries and asked for a more active support of the Auxiliary in this county. Radio talks on preventive medicine were being made weekly. The next annual convention of the State Society will take place June 6 to 9 inclusive. One day will be set aside for the activities of the House of Delegates.

Dr. Morrison, the Recording Secretary, discussed "annual registration", and spoke of the success of such registration laws in New York and Pennsylvania in wiping out illegal practitioners. He asked that the delegates to the Welfare Committee be instructed to work for this measure. He advised that the County Society give up one meeting a year to the subject of "medical economics" and another to "public relations" and urged that all members should take their places as citizens of the community in all public movements. County societies should endeavor to develop public speakers and issue newspaper articles on appropriate medical subjects. The diphtheria campaign was then discussed and it was shown how both the incidence and mortality of the disease were on the increase in New Jersey.

Clinical Society of North Hudson Hospital, Weehawken, N. J.

Abraham Schulman, M.D., Secretary

The regular monthly meeting of the Clinical Society of North Hudson Hospital was held at the hospital December 20, 1927, at 8:30 p. m. and was called to order by Dr. Henry Klaus, chairman.

The regular monthly hospital report was read by Dr. A. Schulman. During the month of November, 280 cases were admitted, 265 discharged as cured or improved, 6 as unimproved, and there were 19 deaths, giving a mortality of 7%. Eight deaths occurred on both the medical and surgical services. Two deaths were in the newborn and one was obstetrical. The fatal cases were discussed fully.

The first contribution to the scientific program was presented by Dr. Eugene Luippold, attending physician, who gave a complete analytical and statistical report of the 59 cases admitted to his service for the months of August, September, and October, 1927. He also enumerated the cases seen in consultation on the surgical service in which medical assistance was rendered in diagnosis and treatment. The number of mortalities in this series totaled 6, or 10% for the entire service. Five of these deaths were in individuals between the ages of 70 and 85 years of age and represented a terminal picture of a long list of degenerative changes in all organs. The 6 mortalities were reported as follows:

Case 1.—Woman, 84 years, admitted October 2, Examination showed extreme senile debility and dementia, with chronic myocarditis. Death occurred October 29, from hypostatic pneumonia and cardiac decompensation.

Case 2.—Man, 71 years, admitted September 9, unconscious, with complete right hemiplegia and Cheyne-Stokes breathing. Died 2 hours after admission without having regained consciousness.

Case 3.—Admitted October 16, in deep coma. Examination showed paralysis of the facial muscles of the right side, with right dilated pupil, Cheyne-Stokes breathing. Deep coma persisted till death, about 12 hours after admission.

Case 4.—Patient admitted to hospital August 14, with a slow gangrenous process of the right foot from advanced arteriosclerosis and thrombosis of the popliteal artery. A terminal embolism and thrombosis of the cerebral vessels hastened death which occurred September 2.

Case 5.—Man, 85 years, admitted August 4, with chronic myocarditis and senile debility. Developed hypostatic pneumonia and died August 14.

Case 6.—Patient, age 47, admitted June 21, with general glandular enlargements. Numerous blood examinations showed typical myelogenous leukemia. Death occurred October 31, from emaciation and exhaustion. Complete autopsy confirmed diagnosis.

Excluding the deaths of the 2 patients in this series who were moribund on admission and died within less than 12 hours, the actual mortality for the whole series of case was 6.7%.

Dr. Henry Klaus in reporting his surgical service for the same period of time, presented a complete analytical and statistical review of the 247 cases admitted, including a complete nomenclature, list of operations and operative procedures.

The number of mortalities in this series was 12, or 4.8%. Seven of these patients were moribund on admission, 5 having fractured skulls with extensive cranial injuries, which caused death within 2 to 24 hours; one had sustained a rupture of the common bile duct with extensive peritonitis and shock resulting in death 18 hours after admission, and one died of multiple generalized tuberculosis 36 hours after admission, no operation having been performed. Excluding these 7 moribund cases, the actual institutional mortality for the service was a fraction over 2%. Excluding reduction of fractures, 114 patients in this series were operated upon, with 8 deaths, giving an operative mortality of 7%. Of these 8 deaths, 4 were in individuals ranging from 60 to 77 years of age, with acute surgical abdomens complicated by advanced renal and cardiac changes, and were all exceptionally poor surgical risks, one dying on the thirty-seventh day from a cardiac decompensation. Two cases presented moribund fractures of the skull with some localization symptoms, in which surgical intervention seemed to afford a slight possibility of recovery. The remaining 2 deaths were in children, both suffering from fulminating blood-stream infections and general sepsis. Four necropsies were performed.

Dr. Klaus reported the mortalities as follows:

Case 1.—Woman, 77 years, admitted October 13, in semicomatose and profound shock from fracture through base of skull; bleeding freely from nose and mouth; pulse rapid, thready and irregular; skin cold and clammy. Patient had an associated old mitral lesion of the heart; failed to rally from shock and died 1½ hours after admission. Final diagnosis: fracture through base of skull with probable fracture of ribs, and hemothorax.

Case 2.—A child of 18 months, admitted October 24, in profound coma; pupils unequal, right being larger; pulse 72. Large pulsating hematoma over the left temporoparietal region. One hour after admission twitchings of right arm and leg developed, between which the entire right side seemed paralyzed. X-ray showed fracture of the left parietal bone with wide separation. Diagnosis: fracture of the skull with subdural and epidural hemorrhage. Under local anesthesia a Cushing subtemporal decompression was done; comminuted fracture was found, and a section of this fractured bone lifted off, revealing an

extensive epidural hemorrhage. The dura was bulging and on being incised considerable subdural hemorrhage encountered. All bleeding was controlled and the wound closed with a small rubber dam drain. The child died shortly after operation.

Case 3.—Man of 45 years, admitted October 6, in extreme shock from fracture of base of skull. Pulse 136, respirations 44, skin cold and clammy; semicomatose and bleeding from the right ear and nose; no focal symptoms. Chest showed extensive injury with hemothorax. Failed to rally and died 18 hours after admission. No operation.

Case 4.—Patient, aged 72 years, admitted to hospital September 28 in profound coma with bleeding from nose and deep wound over right occipital region of skull; no focal symptoms; spinal fluid bloody and under great pressure. Death 1½ hours after admission. Final diagnosis: basal fracture with extensive medullary injury.

Case 5.—Man, 56 years of age, admitted to hospital September 30 in stuporous condition, showing lacerated wound over right parietal region and exophthalmos of right eye. Spinal fluid bloody and under 40 Hg. pressure. Gradually lapsed into deep coma. Blood pressure rose to 200; restlessness developed with generalized convulsive movements. Right decompression was done, revealing fracture of the temperoparietal bone and subdural hemorrhage. Condition did not improve after operation and death ensued 18 hours later. Autopsy showed no fracture other than that identified at operation but disclosed subdural hemorrhage on left side from contracoup.

Case 6.—Patient, age 60 years, admitted October 3, with history of general abdominal pain and vomiting of 48 hours duration and of many previous attacks of biliary colic. Temperature 102.4° F. Examination showed a sick individual with slight jaundice; general abdominal tenderness and rigidity, mostly confined to right upper quadrant of abdomen. Diagnosis: empyema of gall-bladder. Operation, shortly after admission, showed entire abdominal cavity filled with several quarts of bile; no perforation noted in the small and contracted gall-bladder but in the common duct one fairly large stone was found which was easily removed by choledochotomy. Death occurred 18 hours later from shock. Autopsy showed abdominal cavity free from bile, this having been removed at time of operation. No perforation of gall-bladder but one noted in the common duct at site of the choledochotomy where the stone removed at operation had produced a pressure necrosis.

Case 7.—Woman of 77, admitted September 21 with history of numerous previous attacks of biliary colic. Present attack began 4 days before admission. General condition poor, pulse rapid, irregular and feeble. During the last few years patient had suffered from several attacks of myocardial decompensation with edema. A large tender mass was easily palpable in right upper quadrant of abdomen. Diagnosis: empyema of gall-bladder. Operation, September 21, cholecystostomy under local anesthesia, revealed large gangrenous gall-bladder filled with stones. Patient made uneventful recovery from this surgical procedure; bile drained profusely for several weeks but general condition from cardiac involvement never improved. The heart, which was always poor, suddenly completely decompensated during the fourth week and death from

cardiac failure occurred on the thirty-seventh day after admission.

Case 8.—Man, 36 years of age, admitted moribund October 26, suffering from tuberculous lesions of the lungs, abdomen and left ankle joint. Patient had been operated upon 15 years previously for tuberculous peritonitis. The interesting feature of this case was an indefinite mass which could be felt in the left upper quadrant of the abdomen, associated with considerable pain and tenderness. Death occurred 36 hours after admission; autopsy revealed multiple tuberculosis of the lungs, both kidneys, and left ankle joint. Left kidney presented large tuberculous pyonephrosis about the size of a child's head. No operation.

Case 9.—Woman, age 66 years, admitted August 21, with large recurrent umbilical hernia containing practically all of the small and large intestines. Three days before admission patient began to have severe abdominal pain and vomiting, which during the last 24 hours was fecal. No bowel movements during past 2 days. Entire abdomen markedly distended and tender. Two large masses were felt in the enormous hernial sac. Diagnosis: intestinal obstruction. General condition poor, quite toxic; circulation poor, face cyanotic, extremities cold, due to cardiac embarrassment from extreme distention in an exceptionally obese woman. At operation on day of admission the obstruction was found and relieved, after which the patient improved considerably; vomiting ceased and bowels began to function, but death occurred on the eighth day from secondary cardiac failure and edema of the lungs.

Case 10.—Patient, age 77 years, admitted August 24, with acute surgical abdomen. An indefinite tender mass was felt in right upper quadrant of abdomen, associated with tarry stools and marked secondary anemia. Transfusion was done. Operation 3 days later showed a large mass in right upper abdominal quadrant involving the liver, gall-bladder and hepatic flexure of colon. Resection was impossible but an ileocolostomy was done to relieve obstruction at hepatic flexure by excluding tumor. Death occurred August 29. Autopsy showed primary carcinoma of gall-bladder which had perforated directly into the liver, forming a large hepatic and subhepatic abscess. Numerous gall-stones were found in the abscess. The hepatic flexure was completely obstructed from compression by the growth and inflammatory mass but the colon itself was free from invasion.

Case 11.—Child, age 11 years, admitted October 14 with history of infection of the sole of the foot followed about one week later by fever, chills and severe pain and swelling of the upper third of the left thigh and hip. Patient was extremely sick and toxic; temperature 103° F., pulse 140. Examination showed considerable swelling and marked tenderness over upper third of left femur and hip. Two blood cultures were positive for *Staphylococcus aureus*. Diagnosis: Acute osteomyelitis of the femur. Operation the same day showed considerable edema of the tissues of the upper third of the thigh. Incision of the periosteum in front of the great trochanter released some turbid fluid. The femur was entered with a Hudson burr in front of the great trochanter and, although no free pus was found, the bone-marrow was in a process of acute inflammation. Cultures showed *Staphylococcus aureus*. Death occurred October 18, from acute fulminating toxemia and sepsis. Mercurochrome

was given in small doses intravenously in this case.

Case 12.—Infant, 1 year of age, admitted August 30, with history of tonsillitis of 3 days duration which had cleared up and on the fifth day was followed by fever, vomiting and diarrhea. Examination revealed a very sick infant with general abdominal rigidity, most pronounced in right lower abdominal quadrant. W. B. C., 30,000. Diagnosis: acute appendicitis. Operation the next day disclosed primary peritonitis, lower abdominal cavity filled with pus, appendix normal; no perforations of gastro-intestinal tract noted. Cultures of blood and abdominal fluid showed streptococcus on several occasions. Final diagnosis: primary peritonitis following tonsillitis. Death occurred from septicemia 14 days after operation, patient having improved immediately after operation but finally succumbing to the severe general infection.

Dr. C. L. DeMerritt, attending urologist, presented 2 cases of stricture of the femal urethra. The first was in a woman, 36 years of age, who was first seen in November, 1922, with a history of frequency in urination; the stream then began to grow smaller and patient felt an obstruction which she had to bear down to overcome. Finally she was passing small amounts of urine, often bloody and at frequent intervals, accompanied by a good deal of straining. Examination at this time showed slight distention of the bladder. The urethra admitted a No. 25 sound to a point about half-way to the bladder. From this point only a filiform could be passed. Under ether anesthesia a 22 urethroscope was passed to the stricture, and obturator withdrawn. The tube, while being held in place with some pressure, suddenly slipped into the bladder, and, as later observation with the urethroscope showed, split the stricture along the dorsal wall of the urethra. Subsequently the patient had slightly bloody urination for several days. After-treatment consisted of dilatation at varying intervals, first with ordinary round sounds, later with a conical dilator made for this case, the tapered part having a triangular rather than a round cross section. Dr. DeMerritt explained with how much greater ease a triangular dilator penetrates a stricture than the round type, the principle of which he is now working out in ordinary urethral dilatation. He also stressed the importance of a thorough course of dilatations in the after-treatment inasmuch as the urethra soon recontracts. Since the last dilatation, 1½ years ago, this patient has had no further trouble, and on 2 subsequent examinations the urethra easily admitted an 18 sound. The etiology of the stricture in this case was no doubt tuberculous inasmuch as the history was distinctly tuberculous, with no indication of gonorrhoea or trauma. Repeated urethral smears for gonococci and tuberculosis proved negative.

Dr. De Meritt's second case was in a woman, aged 38 years, who had had several gynecologic operations, no doubt of gonorrhoeal origin. The history of her present trouble dated back 2 years when she first noticed diminished force and size of stream on urination, with occasional hematuria. Later she had several attacks of retention for which catheterization was necessary, after which she was relieved for variable periods of time. Examination showed a caruncle, 1 cm. in diameter, covering the meatus, but was no obstacle to a 26 sound which met an obstruction at the upper part of the urethra, about 0.5 cm. from the bladder. Beyond this point a 10 metal

catheter passed with difficulty and removed 750 c.c. urine. Under anesthesia the stricture was forcibly dilated to admit a 20 observation cystoscope. With an Otis urethrotome the stricture was expanded and cut so as to pass a 35 sound. The caruncle was also removed. Subsequent treatment consisted of periodic dilatations. At present, 4 months after operation, patient takes a 26 sound easily and urinates freely at normal intervals. Dr. DeMeritt pointed out that stricture in the female urethra, which was formerly thought to be rather rare, is now fairly common.

Dr. J. H. Hekimian, assistant urologist, presented a case report of stricture of the urethra with acute complete retention. The patient, a man of 59 years of age, was admitted October 23, 1927. His history dated back to a gonorrhoeal infection 24 years ago. Six years ago he developed acute complete retention which was relieved by external urethrotomy but he left the hospital with perineal urinary sinus. Since then he has been able to void except for occasional complete retentions which were relieved by spontaneous diversion of urine into the perineal sinus. Twenty-four hours before admission he was unable to void and as the perineal sinus did not yield he was referred to the hospital with complete obstruction. Examination showed a markedly distended bladder. Catheters, sounds and filiforms failed to engage the obstruction in the posterior urethra. Palliative measures seemed out of the question in such a dense fibrous stricture complicated by a chronic perineal sinus, and immediate external urethrotomy was done, dissecting out the sinus and scar tissue. Exposure of the urethra disclosed a stricture about 1 in. long at the bulbomembranous junction. A No. 22 F soft rubber catheter was passed through the anterior urethra into the bladder and the wound closed over the catheter which was strapped in place for continuous drainage. Postoperative course was uneventful. Catheter was removed on the twelfth day and the perineal wound was closed on the fourteenth day. Urethra now easily admits passage of a No. 27 F sound. Dr. Hekimian pointed out that, with the exception of trauma, the most common cause of stricture in the male is gonorrhoeal infection of the urethral glands, and that the pathology in the majority of cases is established within the first year of the primary infection. Neglect of treatment, overzealous treatment, and unskilled instrumentation are all equally responsible factors in the etiology.

The following case was presented by Dr. C. H. Tannert, assistant surgeon, from the surgical service of Dr. L. Lange: A man, age 74 years, was admitted to hospital November 13, 1927, chief complaint being pain in the epigastrium, vomiting and constipation of 4 weeks duration. The history of gastric disturbance dated back about 4 years when he entered a hospital for observation for gastric carcinoma but the symptoms of heart-burn, belching of gas, loss of weight and appetite continued up until 4 weeks ago when he began to have epigastric pain and vomiting. Patient was considerably emaciated and complained of some tenderness in the epigastrium. Clinical laboratory findings were negative except for a moderate secondary anemia; Wassermann negative. Radiographic examination showed dilatation of the stomach and duodenum with an obstruction in the third portion of the duodenum. Diagnosis: carcinoma or ulcer of the third portion of the duodenum with obstruction. Two days after admission an exploratory laparotomy

was done under local infiltration and anterior splanchnic anesthesia. Findings: through the transverse mesocolon and behind the posterior parietal peritoneum a small mass was felt in the third portion of the duodenum, above which the duodenum was found considerably dilated. Just beyond the duodenojejunal angle the loops of jejunum were found considerably adherent to each other. An anterior gastrojejunostomy without clamps was done to relieve the duodenal obstruction by exclusion of the duodenum. The fact that after operation, in spite of all measures used, the vomiting continued was believed to be due either to an improperly functioning gastrojejunostomy or to improper drainage of the long afferent loop in an anterior gastro-enterostomy, inasmuch as an obstruction already existed in the third portion of the duodenum, making the emptying of this loop difficult at best. Therefore, on November 18, three days later, an entero-enterostomy was performed between the 2 loops of the jejunostomy, with the hope that this would stop the vomiting by a better drainage of the proximal loop of the gastrojejunostomy. At this operation it was noted that there was a slight fibrinous exudate about the site of the gastrojejunostomy, with some serous fluid in the abdominal cavity. The proximal loop of the gastrojejunostomy, which was found distended, collapsed after completion of the entero-enterostomy. Vomiting persisted and radiographic examination November 25, showed a nonfunctioning gastrojejunostomy with gastric retention. There being no improvement, a second gastrojejunostomy by the anterior method was done November 28, but only after considerable difficulty due to the numerous adhesions encountered. Condition of the patient at this time was so critical that an enterostomy seemed unwise, although it was indicated. The original gastrojejunostomy was not detached, so that at the conclusion of this operation there was a double anterior gastrojejunostomy with an entero-enterostomy in the first. Vomiting continued, although gastric lavage and duodenal alimentation were used. Inasmuch as the patient was rapidly losing ground a simple jejunostomy were performed December 3, for the purpose of feeding. Although all feedings were given through this tube, the vomiting persisted and on the day of death, December 7, was fecal in character. Autopsy revealed extensive suppurative peritonitis with considerable accumulation of pus throughout the abdominal cavity. Both gastrojejunostomy and enterostomies were found intact and no leakages noted. The first gastrojejunostomy admitted only one finger but the second admitted 3 fingers. The mass in the third portion of the duodenum proved to have been an old and large indurated ulcer. The obstruction at this site seemed practically complete with marked dilatation of the duodenum above the obstruction. Dr. Tannert pointed out that a duodenojejunostomy would have been the most logical procedure in this case at the very start but was impossible in face of the many adhesions encountered.

Dr. Louis Lange, attending surgeon, presented 3 cases from his surgical service. The first was that of a man, admitted December 29, 1926, complaining of abdominal pain and vomiting. His present illness dated back to October, 1925, when he suddenly vomited a considerable amount of blood. Since that time he had had pain in the epigastrium and vomiting at frequent intervals. Pain is sharp and stabbing, usually beginning in the epigastrium and radiating into the right upper abdominal quadrant, and into the back and

shoulders. Food does not relieve the pain but at times seems to aggravate it. Patient has been jaundiced on two occasions; has lost 15 lb. in weight. Physical examination negative except for some slight tenderness in the right hypochondrium. Clinical findings normal, excepting for a moderate secondary anemia. Radiographic examination showed gastric retention and deformity of the duodenum. Provisional diagnosis: chronic ulcer of the second portion of the duodenum, possibly malignant degeneration. Operation December 29, 1926, revealed a mass about the size of a walnut, hard and nodular, situated on the inner wall of the second portion of the duodenum. A crater in the center of the mass could be felt. No enlarged glands were found in the pyloroduodenal region or along the lesser curvature of the stomach. Operative procedure consisted of a posterior gastro-enterostomy by the no-loop, no-clamp method. Postoperative course and convalescence smooth and uneventful. Patient was discharged cured January 20, 1927. He has been seen about once a month since that time and has remained free from further gastric symptoms. Subsequent radiographic examination shows a well functioning gastro-enterostomy.

Dr. Lange's second case report concerned a man, aged 51 years, upon whom he had operated August 18, 1921. His chief complaints at that time were abdominal pain and indigestion coming on in attacks periodically every 6 months to 2 years for the past 15 years. During the 3 months preceding operation the abdominal pain had been more intense and had come on more frequently; it was increased by eating and relieved by nothing except vomiting, which occurred occasionally. The pain was of a burning character, more to the left side of the epigastrium. Patient had never been jaundiced, but his weight had fallen off slightly. Physical examination showed no abnormality except slight tenderness in the epigastrium and a slightly palpable liver. Radiographic examination showed a defect at the pylorus with some dilatation and delay in emptying of the stomach. Provisional diagnosis: gall-bladder disease.

At operation, August 18, 1921, a mass about the size of a small lemon, hard and adherent to the pancreas, was found in the pyloric region of the stomach. A pylorotomy was done by the posterior Polya method, in the course of which a portion of the pancreas was removed as a result of the adherence of the tumor to the pancreas. A small pancreatic fistula resulted but this was completely closed after one month. The specimen was pronounced by both Drs. E. Luippold and A. Fraser to be a medullary carcinoma of the duodenum. After this operation the patient rapidly gained weight and remained well up till October 1923, when he developed an acute cholecystitis. The gall-bladder was drained, after which he made an uneventful recovery and has enjoyed good health up to the present time. The case is reported as a cure of carcinoma 6 years after operation and the occurrence of an acute cholecystitis following pylorotomy. Similar cases have been reported by several continental surgeons.

The third of Dr. Lange's cases occurred in a man, 30 years of age, who was admitted to hospital December 17, 1926, with history of severe generalized abdominal pain of several hours duration, which had come on very suddenly, after a slight indisposition of several days. Examination showed a sick individual with a temperature of 104° F., respirations 30; pulse 115. Face congested, breathing rapid and grunting. Chest

showed a few scattered râles but no evidence of consolidation. No abdominal rigidity but some tenderness in the right lower quadrant. Blood: W. B. C., 10,000, polymorphonuclears 81%, on December 17, 1926. The following day the W. B. C. fell to 7600, with 64% polymorphonuclears. During the period of observation patient had no vomiting nor distention. There had been no chill but he had a slight cough with blood tinged sputum. As abdominal pain and tenderness increased operation was done December 18, under local anesthesia. On opening the peritoneum considerable brownish fluid escaped. On the lateral wall of the ileum, about 6 in. from its termination, a perforation was found, 1.5 cm. in diameter, which was partly closed by a mucous plug. The bowel wall around the perforation was markedly thickened and edematous; appendix normal. A tube was inserted through the perforation and the bowel drained, as in the Witzel method of enterostomy, and the bowel anchored to the parietal peritoneum at the site of the perforation. A cigaret drain was inserted in the pelvis. Death occurred December 20, from spreading peritonitis. Examination of the specimen postmortem failed to show typhoid or tubercle bacilli or ameba. Colon bacilli were present. Because of postoperative changes in the ulcer, microscopic examination failed to reveal the etiology, but considering the great congestion and round cell infiltration, an acute inflammatory process seems the most likely supposition.

Dr. Theo Elsasser presented a case report, from the service of Dr. Lange, of ulcer of the pylorus 4 years after pylorotomy. The patient, a man 54 years of age, was admitted to hospital October 31, 1927, with a history of gastric disturbance, which extended over a period of 12 years, and was characterized by epigastric pain which had become much worse during the past few years, with vomiting at frequent intervals, at times blood tinged. Blood had been noticed in the stools and there had been a 15 lb. loss in weight. Examination showed an anemic male, hemoglobin 20%, R. B. C. 2,100,000. Except for some tenderness and slight rigidity in the left epigastrium, findings were negative. Radiographic examination showed a defect in the pylorus. After 2 blood transfusions, operation under regional infiltration and splanchnic block was performed. A hard nodular mass was found on the posterior wall of the stomach close to the pylorus which proved to be a perforating ulcer. The pylorus, including the mass, was resected and an anastomosis made by the Billroth II method. Patient made an uneventful recovery and was discharged December 2, 1923. He has been seen on numerous occasions since and up to the present date has remained well and free from any gastric symptoms.

Dr. L. E. Evans, attending physician, reported 2 interesting cases of lobar pneumonia. The first was that of a girl, age 16 years, who was admitted to hospital November 9, 1927, with history of pain in right side of chest, cough, fever and difficulty in breathing. During her early infancy she had suffered from what was evidently acute poliomyelitis with resulting paralysis of left arm and chest, which subsequently caused marked deformity of chest and spine. Examination revealed a definite arching of the spine, both posteriorly and laterally, toward the right, together with a dragging and buckling of the chest wall; heart apparently not enlarged; consolidation over right lower lobe; over left lower lobe were some few râles which after the fourth day were accompanied with impaired resonance

and tubular breathing. W. B. C. 20,000; polymorphonuclears 70%. On the twelfth day the temperature approached normal by rapid lysis with a corresponding relief of symptoms and patient was discharged cured December 7, 1927.

The second case of lobar pneumonia was in a man 44 years of age, who walked into the hospital November 14, 1927, with a temperature of 106° F., having been sick 2 days. He gave the usual history of chill, fever and pain in the chest. Examination showed consolidation of left lower lobe. X-ray confirmed the diagnosis. The toxemia in this case was extreme and, together with the circulatory inadequacy and the marked distension caused death on the fourth day.

Dr. P. D'Acerno, attending obstetrician, presented the following case of vaginal cesarean section for dystocia caused by a rigid cervix in a primigravida, age 28 years. General history and physical examination were negative; urine showed 9% by volume of albumin with a few casts. Vaginal examination showed a normal vertex presentation. Sixteen and one-half hours after onset of labor dilatation of the cervix had reached 3 cm., at which stage patient began to show symptoms of exhaustion and was referred to hospital May 19, 1927. Pelvic measurements normal. The first stage of labor having progressed 22 hours and the cervix remaining rigid with no further dilatation, Dr. D'Acerno decided upon a vaginal cesarean section according to the Dührsen technic. A T incision was made in the vaginal mucosa in front of the cervix and the bladder was carefully separated from the anterior surface of the uterus and lower uterine segment. A 10 cm. incision was made through the anterior lip of the cervix and lower uterine segment. The posterior vaginal fornix was then exposed by tilting the cervix forward, the mucosa was incised transversely at the cervical junction, and the peritoneum separated from the posterior wall of the cervix and lower uterine segment, in which a 5 cm. incision was then made. Small obstetric forceps were applied and a living male infant extracted. Due to the atony of the uterine muscle it was necessary to extract the placenta manually after 20 minutes. The anterior uterine and posterior uterine incisions were repaired and the edges of the mucous membrane of the vagina sutured. Postoperative course was uneventful and patient was discharged from the hospital on the twelfth day. The follow up 3 months later showed no abnormalities of the genitalia.

Dr. D'Acerno emphasized the importance of the anterior and posterior incisions through the cervix in order to give sufficient room to extract the head, whereas if only the anterior incision through the cervix is made it must be at least 15 to 16 cm. long and would require entering the peritoneal cavity.

Dr. D'Acerno reported 2 cases of low or cervical cesarean section done according to the Beck technic, in which he brought out the advantages of this method over the older or classical cesarean. He stressed the facts that the low cesarean section is attended by much less bleeding, much less shock and reaction on the part of the patient, less chance of infection, and consequently much less risk to both mother and child. In the first of the 2 cases, a secundipara, age 25, was admitted October 3, 1927. First labor had terminated with instrumental delivery of a living child, weighing 13½ lb.; second terminated by internal version and podalic extraction. Pelvic measurements showed slightly contracted pelvis. After patient had been in labor for 24 hours, showing no progress and very little dila-

tation of the cervix, a cervical cesarean section was decided upon in view of history and findings. Postoperative course was uneventful and patient was discharged on the fifteenth day.

In the second case the patient was a primipara, 25 years of age, admitted to hospital October 11, 1927. Obstetric examination showed a slightly contracted pelvis with impaction of the fetal head at the upper strait. Dilatation of the cervix had progressed no further than 2 fingers at the end of 20 hours. Due to the postmaturity of the child, the disproportion between the passage and the passenger, and the uterine dystocia, all occurring in a primipara, a cervical cesarean section was decided upon. Postoperative course was uneventful and patient was discharged on the fifteenth day.

Osler Clinical Society

M. I. Marshak, M.D., Reporter

The Osler Clinical Society met at the Union League Club, Jersey City, December 21, with Dr. Miner presiding.

Dr. H. Franklin reported a case of multiple metastasis in a woman, 55 years of age, whose chief complaint was directed to pains in the left thigh. Examination revealed a small, chronic, indurated ulcer in the left breast. X-ray examination of both femurs showed rarefied areas of bone indicating malignancy, and the chest plate showed densities in both places having the character of fluid. The cervical spines also exhibited rarefied areas. The case was reported to demonstrate the extent of metastasis present where the primary lesion was a small, practically nongrowing tumor.

Dr. Waters showed the x-ray plate and read a report of a case of metastatic cancer of the humerus. The primary lesion was a small scirrhous cancer of the left breast, of over 2 years' duration. Drs. Jaffin, Perlberg, Miner, Brounstein and Brooke discussed these reports.

Dr. Rosenstein read a short paper on "Acute Abdominal Pain in the Child". He stated that, though the subject was extensive, he had made his paper short in the hope that there would be a free discussion on this most important subject. In the hypersensitive child pain may be a worthless symptom. Violent and sudden pain may mean flatulence, obstruction or perforation. In intestinal colic the pain is sudden and the abdomen may be rigid, but is immediately relieved on the expulsion of the flatus. In congenital pyloric obstruction the pain is due to the violent peristalsis above the point of obstruction. Acute appendicitis is indicated if there is abdominal pain, often diffuse, restlessness, flexion of the right thigh on the abdomen and failure to use the abdominal muscles. After the shock period, pain becomes localized. Pain in the right iliac fossa is often present in typhoid fever. In perforation, pain is more diffuse and quite extreme. The pain of perinephritic abscess is often abdominal as well as lumbar in location and may be transmitted toward the hip, while that of renal calculi is frequently passed down to the pelvis, testicle and thigh. In cystitis the pain is over the bladder and in pyelitis it is also referred to the abdomen but is rather dull.

Pneumococcus peritonitis is very difficult to diagnose, especially if it becomes fulminant. Abdominal pain is frequently present during influenza attacks and is a part of the picture of general muscle pains. Pneumonia with dia-

phragmatic pleurisy shows marked abdominal pain and even rigidity. Many cases of acute otitis media develop some abdominal pain which clears up as soon as the drum is ruptured. The speaker could not give any special reason for this type of pain. He cited a number of cases to illustrate his points.

Drs. Heilbrun, Friele, L. Franklin, Brooke, Dickinson, Levine, Jaffin, VonDeesten, H. Franklin and Rosenstein took part in the discussion.

It was brought out in the discussion that in children the interval between acute onset of abdominal pain and death was quite short and that rapid work had to be done to clear up the diagnosis and to decide whether operative procedure was necessary. The quiescent period following the acute shock was stressed. One should guard against feeling too secure during this period.

MERCER COUNTY

A. Dunbar Hutchinson, M.D., Reporter

The Annual Meeting of the Mercer County Medical Society was held in the Carteret Club on December 14. The entire session was devoted to completion of unfinished business and to the election of officers for the ensuing year.

Treasurer North submitted his yearly report which was received with much enthusiasm—the Auditing Committee, composed of Drs. Adams, Harman and George Williams, reporting the books to be well kept and correct in every detail.

The amendment to the By-Laws, relative to yearly dues by Associate Members, was adopted; providing for the payment of \$5 yearly for Associate Members.

A letter from Dr. R. Grant Barry, stating that he now wishes to re-affiliate with Mercer County after an absence from the state for several years, was read and filed.

A communication from the local nursing service of the Metropolitan Life Insurance Company, relative to rules and regulations governing standing orders for visiting nurses, was read and referred to a committee—Drs. Sommer and McGuire.

Following a discussion after the reading of a report relative to publicity surrounding press articles, Drs. Haggerty, Bellis and Reddan were appointed as a committee to confer with a similar committee from the Mercer County Dental Society.

Drs. Haggerty and McGuire spoke in favor of the "annual registration of physicians" and Dr. Schildkraut moved that the society endorse this recommendation. Dr. Pessel seconded the motion which was carried.

Dr. Sica presented the following motion, which, after a very thorough discussion by many of the members, was passed:

"That it is the consensus of opinion of the members of the Mercer County Component Medical Society that the immunization of children against diphtheria by the use of toxin-antitoxin is desirable and strongly recommended, and that it is also recommended that such immunization be under the same rules and regulations as those governing small-pox regulations.

And it is further moved that a copy of this motion be put on the minutes and a copy sent

to the Board of Education, and be published in the Journal of the Medical Society of New Jersey."

The following applicants were elected active members: Drs. E. B. Beairsto, A. D. Summers, L. E. MacDermid, W. C. Ivins, W. N. Rogers, C. C. Franklin, and Mrs. Dr. James B. Mason was elected as an Associate Member. The applications of Drs. William J. Abey, E. E. Graham, W. J. McGinn, Robert Convery and H. L. Whitte, were read and referred to the Membership Committee.

The President then announced that the annual election of officers was in order and appointed Drs. Chianese, Harry Williams and Kuhl, as tellers. The following officers, delegates, censors and committees were nominated, elected and appointed: President, Charles R. Sista; Vice-President, R. B. Seeley; Treasurer, Harry R. North; Secretary and Reporter, A. D. Hutchinson; Censors, William G. Schaffler, G. N. J. Sommer and C. J. Craythorn; Nominating Committee, J. J. McGuire and H. B. Costill; Permanent Delegate, D. Leo Haggerty; Annual Delegates, J. S. Vanneman, Charles R. Sista, Nathan Swern, J. M. Schildkraut and J. F. Pessel; Membership Committee, M. W. Reddan, C. F. Adams and H. D. Bellis; Program Committee, D. L. Haggerty, J. S. Vanneman and J. M. Schildkraut.

Dr. Sica suggested that the society might do well to show appreciation of the services rendered by the long standing coöperation and solid support of its principles, on the part of the older physicians. This suggestion was most heartily received and the officers of the society were moved a committee to proceed with the arrangements for a complimentary dinner in honor of those physicians who graduated in the early '80's—there being several.

An appetizing luncheon completed a large evening.

MIDDLESEX COUNTY

J. M. Gutowski, M.D., Secretary

The annual meeting of the Middlesex County Medical Society was held December 14, 1927, at Hotel Pines at Metuchen, Dr. Henry, Jr., calling the meeting to order at 4 p. m. with about 50 members present. The minutes of the previous meeting were read and accepted.

Under old business, a discussion of the annual registration of physicians in New Jersey was opened. Dr. Louis Wetterberg spoke against this measure and cited a case of a dentist who failed to register and had been heavily fined and was in danger of losing his license through such a measure. Dr. Voorhees, of New Brunswick, also spoke against such a bill.

Dr. Henry, Sr., made a motion which was seconded by Dr. McKiernan, rescinding a motion which was passed at the last meeting in which the Middlesex County Medical Society endorsed the annual registration of physicians in New Jersey. This motion was passed unanimously.

Dr. Mark made a motion which was seconded and passed that a committee be appointed to investigate the proposed measure of annual registration.

A bill for printing by Barlow and Company for \$10.59 was ordered paid.

The following new members were voted on favorably and accepted to the society: Drs. Charles T. Steffens, of Dunellen, N. J.; Samuel Kramer, of Perth Amboy; I. Kemeny, of Carteret.

Dr. McKierman next reported as chairman of a special committee to investigate the office of the present county physician. He explained that the present office-holder, Dr. Suydan, was incompetent. Dr. McKiernan made a motion to have the Middlesex County Society appoint a committee to investigate and put through the legislature a measure such as the Guilliano Bill, which will affect second class counties, so-called; this recommendation to be referred to the Welfare Committee of the New Jersey State Medical Society. This motion was seconded and passed.

Dr. Morrison, of Newark, made a suggestion that Dr. McKiernan be invited to confer with the Welfare Committee concerning this bill.

Dr. Haight next explained a bill which was recently passed at the last legislative session, in which nurses were legalized as examiners of school children. This bill contains no educational qualifications at all. It was passed over the veto of the Governor. Dr. Haight suggested that propaganda campaigns be started through the Boards of Education against this bill. Dr. Voorhees also discussed this new law. Dr. Morrison explained the bad features of the new bill and stated he believed the State Board of Education is not to make use of same.

The nominating committee, consisting of Drs. Meacham, Chairman, Voorhees and Meinzer, next made their report. They proposed the following candidates: President, F. M. Hoffman; Vice-President, William Wilentz; Treasurer, F. C. Johnson; Secretary, J. F. McGovern; Permanent Delegates: A. Clark Hunt, A. L. Smith, E. C. Henry, Sr., J. Wilson, Elbert Schureman, M. S. Meinzer, Fithian Voorhees, Gutman. The report of the nominating committee was accepted unanimously.

Dr. Morrison was next introduced. He spoke on medical economics, changing aspects of the practice of medicine, group work in medicine, and various other topics.

Dr. Hoffman extended an invitation to the members of the society to attend a meeting at the General Hospital in New Brunswick to be held the following day.

Dr. McKiernan made a motion which was seconded and passed that hereafter the meetings of the Middlesex County Medical Society be held monthly.

The meeting was adjourned on motion and the members retired to the dining room where a pleasing dinner was enjoyed.

Medical Section of Rutgers Club.

J. H. Rowland, M. D., Secretary.

The regular monthly meeting of the Medical Section of the Rutgers Club was held on Friday evening, December 16, 1927, at the home of Dr. R. L. McKiernan, New Brunswick, N. J.; 46 members, friends and guests being present. The meeting was called to order promptly at 9 p. m. by Chairman Nafey.

Dr. Edward L. Keyes, Professor of Urology at Cornell Medical College, presented a very instructive paper on "Tumors of the Bladder". The paper was discussed freely.

Dr. McKiernan then served refreshments and everyone returned home feeling that the evening had been well spent.

MONMOUTH COUNTY

F. J. Altschul, M.D., Reporter

The December meeting of the Monmouth County Medical Society was held December 13, at the Country Inn, Freehold, N. J. The December meeting is always held at Freehold and usually is a social "get together" affair, little business being transacted other than the election of officers for the coming year.

A very fine turkey dinner, with all embellishments, was served. During and after the dinner the society was entertained by Dr. W. Frederick Jamison, of Bradley Beach, voted unanimously the best story-teller in the society.

The Auditing Committee, consisting of Drs. Harold Kazmann, of Long Branch, and W. E. Anderson, of Englishtown, found the Treasurer's Report correct and both the Treasurer, Dr. Robert Watkins, and the Secretary, Dr. Dan Featherston, were commended for their excellent and painstaking work during the year.

The Nominating Committee, consisting of Drs. W. Fairbanks, W. Hartman, and J. Fisher, presented the following names as officers for the year 1928: President, John C. Clayton, Freehold; Vice-President, W. K. Campbell, Long Branch; Secretary, D. F. Featherston, Asbury Park; Treasurer, R. Watkins, Belmar; Reporter, F. J. Altschul, Long Branch; Permanent Delegates to State Society, H. B. Slocum, Long Branch; H. E. Shaw, Long Branch; H. W. Ingling, Freehold; W. G. Herrman, Asbury Park; C. M. Trippe, Asbury Park; G. V. V. Warner, Red Bank; Harvey Brown, Freehold; Annual Delegates, S. W. Hausman, Red Bank; C. B. Blaisdell, Long Branch; J. B. Makin, Asbury Park. The above officers were elected unanimously.

Dr. B. H. Garrison, the retiring president, then said a few words thanking the society for the support given him during the year 1927, after which Dr. J. C. Clayton, the new president, made a short address.

The meeting then adjourned.

MORRIS COUNTY

Marcus A. Curry, M.D., Reporter

The regular quarterly meeting of the Morris County Medical Society was held on the evening of Tuesday, December 13, at the State Hospital at Greystone Park, where the motion picture machine was made available for the showing of films necessary to the scientific part of the program.

President Haven presided with evident gratification over a greatly improved attendance; there being 40 members present, representing about 75% of the total membership, with 10 guests, making a total assemblage of 50. Among the guests were Harvey M. Ewing of Mountainside Hospital, Montclair; Royce Paddock, of Newark; the newer members of the State Hospital medical staff; and others. Whether the efforts of the executive committee among the members, or the scientific program provided, was responsible, the

work for bigger and better meetings unquestionably is bringing results.

Routine business was transacted, including a very satisfactory report of the Treasurer, and in addition to the reading of the minutes Secretary Lathrope also read the proceedings of the meetings of the executive committee which brought out plans for discussion and action.

Four new members were admitted to the society: Thomas B. Christian, William M. Bartlett, Ralph Eckert and William S. Voorhees. One proposal for membership was made, Dr. Heinig of Boonton, and referred to the committee on credentials.

President Haven spoke on the matter of the secretary's circular letter inviting from members suggestions of programs for meetings; stating that the executive committee has had some replies and should like to have had more; that we are trying to work out a program that will be of interest to the members and will embody what they most should like to have; if anybody has any suggestions which he has not written and sent in, the executive committee would like to have them as soon as possible, or if anybody has suggestions to make personally they should like to hear them.

Dr. Lathrope, speaking on the subject of the invitation to send in suggestions, said that when the secretary sends out a circular letter asking questions, he would like a reply; that 5 answers from the total membership is a low percentage.

Among the items brought out for discussion in the report of the executive committee was that of a "Publicity Committee", which had been discussed at the last meeting of the executive committee. President Haven explained that the idea, in general is that the county society should have a publicity committee whose function would be to disseminate information of educational value to the public, particularly with relation to public health matters; as we all know, a great deal of misinformation gets around when such things arise as an outbreak of diphtheria, a threatened outbreak of small-pox, etc., and a great many people don't know where they stand; they don't know despite what they see in the newspapers about the Schick test, immunization, etc., they have no idea of just what it is and just what should be done; the idea is not to enter upon any controversial subjects at all but to give information in the press as the committee may deem advisable, over the signature of the county society, in the hope that it will carry some weight and in the hope that the public will look for such information when these conditions arise; the idea suggested was to have a committee of 2 appointed to get out material for publication and have an auxiliary committee consisting of 1 in each town where there is a newspaper, so the central committee could write the article and send it to these men for publication simultaneously; and also, so that if anything is sent out which he didn't approve of or wouldn't go well in his particular community the local man could get in touch with the committee and it could be held up; or he could submit matters of purely local interest.

Motion of Dr. Larson, seconded by Dr. Curry, that the President appoint such a committee, brought the proposal under considerable discussion, some favoring a larger central committee and others advocating the smaller committee as more workable. Being put to vote the original motion was carried, that the President be empowered to appoint a Publicity Committee of 2

members with an auxiliary committee consisting of a member from each town in the county where there is a newspaper published.

President Haven explained the matter of library facilities which had been considered by the executive committee; stating that the suggestion had been made at the last meeting of the committee that we ought to have some sort of library facilities in the county, the nearest being at the Academy of Medicine in Newark, and after that in New York Academy of Medicine; that after the matter had been discussed at considerable length, the committee thought it might be practicable for the society to subscribe to such magazines as we might want, 10 or 12 or more, and find some place to file them for use and reference; that the librarian of the Morristown Library had been interviewed and gave assurance of a corner of a room with shelving and that she had been approached on the subject for a trial of 1 year and she was extremely glad to enter into the arrangement; the society to pay the subscriptions and the library to receive and handle the publications; they probably will be kept in the gallery, not open to the general public, unless some interested individual came along and wanted to look up something; and they would be available to the members of the society at all times; the librarian could keep track of how much the magazines were used and give us some idea of their value to the society; and after that the magazine could be bound and the arrangement go on indefinitely; expressing the belief that if such a meeting place were used sufficiently the library authorities would be glad to make it a permanent part of their library work; suggesting, in order to get this going, that the appointment of a Library Committee be considered to select magazines to be subscribed for and see that they are ordered and the work carried on in conjunction with the library authorities, and suggesting about \$200 to cover subscriptions.

Action was taken empowering the President to appoint a Library Committee to work in conjunction with the Morristown Library authorities, and to appropriate \$200 for the year 1928.

Suggestion was made for similar arrangements for Dover and Boonton, if they only could be made.

Superintendent Curry invited the members to come to the State Hospital at Greystone Park where there is a medical library with the current magazines and reading room; that he would be very glad to have the members come and use the library facilities which would be available to them at any time.

President Haven spoke on the program for the balance of the year; stating that following the suggestion of some of the members, it is being planned to have 1 or 2 extra meetings; 1 probably in February and 1 between the March and June regular meetings; that the program is not ready as yet for definite announcement, but in a general way the tentative plan calls for some subject connected with pediatrics for the March meeting, the papers to be read by members of the society, and this will be announced more definitely later; for the June meeting the tentative plan is to make it a clinical meeting, the reading of case reports, the members of the society to present worked up cases; this to be elaborated further, the purpose being to bring out the kind of program that is most acceptable to the society, and if it goes well to make it a permanent thing; that in the by-laws there is a provision for case

reports, which has been allowed to fall into the discard in late years. For the special meeting, probably in February, the subject will be "Diseases of the Bones" with x-ray pictures, although this may have to be reversed with the regular March meeting, depending on whether or not we can get a speaker. For the special meeting between March and June the subject will be "The Heart".

The scientific program of the evening was "Moving Picture Clinics" divided into 2 parts:

(1) "Syphilis of the Circulatory System, with Special Reference to the Heart and Aorta", the subject being presented by Dr. Orrin Sage Wightman, Attending Physician, New York City Hospital.

(2) "Syphilis of the Nervous System as Met With by the General Practitioner", presented by Dr. Edward Livingston Hunt, Attending Neurologist, New York City Hospital and St. Luke's Hospital, New York.

The pictures screened were filmed from the neurologic service of the New York City Hospital, at Welfare Island, and exhibited some excellent specimens, with progress of the infection, pathology, and autopsy findings. It was emphasized that the manual worker engaged in physical exertions runs more to syphilis of the circulatory system, while the neurotic, highly trained, nervous type are more subject to syphilis of the nervous system; and that the ratio is about 1 woman to 4 men.

The pictures and their accompanying emphasis of particular points by the guest speakers were of great interest and accomplished well their purpose as pressing reminders of the conditions exhibited.

A rising vote of thanks was given to the speakers for the program of pictures and talks which featured a highly successful meeting.

President Haven, owing to the lateness of the hour, announced that there was little time for discussion but he did wish to call upon two or three persons.

Dr. Ewing of Mountinside Hospital, Montclair, responded and in his discussion made a point, that where cardiovascular disease is adequately treated as such and does not respond, syphilis may be suspected and the patient should be given antisyphilitic treatment.

Clinical Director Lane and Pathologist Christian, of the State Hospital at Greystone Park, were also called upon and responded, with interesting details of clinical and laboratory work on cases in point and outlining the work as carried on at the institution.

On invitation of Superintendent Curry, refreshments were enjoyed in cafeteria style.

OCEAN COUNTY

George W. Lawrence, M.D., Reporter

A special meeting of the Ocean County Medical Society was held at the Laurel-in-the-Pines, Lakewood, N. J., November 30, being called to order by Dr. F. Bunnell, President, at 5 p. m., with a good attendance present.

One of the special features of this meeting was the consideration of forming a Woman's Auxiliary. Some of the wives and daughters were present and had a separate session with Dr. Reik, who explained to them the object of such a society. The

ladies adopted the idea enthusiastically and immediately perfected their organization.

In the session of the society, after the minutes of the last meeting were read, 2 applications for membership were referred to the Committee on Membership to be taken up at the next regular meeting.

The old discussion of "By-Laws" came up and a new committee of 2 members, Drs. E. G. Herbener and H. B. Disbrow, were appointed to present at the next meeting a draft of proposed By-Laws for this society.

Dr. Reik, having finished his session with the ladies, came in and presented a plan of health examinations. He reviewed the history of such work from the time of its suggestion by Dr. George M. Gould, 27 years ago, up to the present time and also showed a film of moving pictures to give an outline of how to make their examinations in a systematic way. After some discussion of these points, the meeting adjourned to the dining room where we were joined by the new auxiliary and a delectable banquet was enjoyed by the entire company.

After the banquet, a paper prepared for the meeting was read by Dr. George W. Lawrence and discussed by Dr. H. B. Disbrow and the final adjournment was at 9 p. m. (Paper to be published later.)

It seemed to be the concensus of opinion that more frequent meetings should be held by this society and various suggestions have been made ranging from a meeting once a month to having 4 per year. Undoubtedly the new By-Laws will provide for more meetings than the society has had in the past and will bring the men of Ocean County in closer touch with each other.

SALEM COUNTY

William H. James, M. D., Reporter

Regular meeting of the Salem County Medical Society was held at the Memorial Hospital, Salem, N. J., December 14, at 2 p. m., being called to order by President R. M. A. Davis.

The regular business of the society was carried on in the usual way. There were no matters of importance before the society and as there were 3 visitors who were to speak, the society proceeded to that part of the program at once.

The first speaker was Dr. Walt P. Conaway, President of the State Medical Society. He urged the members of county societies to attend the state society meetings and to cooperate with the officers to make the coming annual meeting a success: it is surprising how few of the members attend the state meetings. At the one in June there will be sectional groups for special discussion of ear, eye, nose and throat and pediatrics. Other preparations are also being made to attract the attention of members.

Dr. Henry O. Reik, Editor of the Journal, spoke on "Immunization Against Diphtheria" by the use of toxin-antitoxin and the Schick Test, and on "Control of Scarlet Fever", as did Mr. D. C. Bowen, Director of the State Board of Health. Both of these talks were very interesting and instructive. There were no points that were not fully brought out. A rising vote of thanks was given Dr. Reik and Mr. Bowen.

At the conclusion of the meeting the society enjoyed a roast pig dinner at Johnson Hotel.

SOMERSET COUNTY

Lancelot Ely, M. D., Reporter

The Somerset County Medical Society held its regular meeting on December 8, at the Somerville Public School, 9 members present. Dr. Dan S. Renner, President, in the chair. Dr. K. Winfield Ney, of New York City, gave a paper on "Traumatic Lesions of the Central Nervous System, and Intracranial Pressure", lantern slides being used to illustrate the talk. Those present voted appreciation of a most valuable and instructive paper.

Congratulations were ordered sent to Dr. David F. Weeks, a member of the society, in recognition of his twentieth anniversary as Superintendent of the Skillman Epileptic Village, and of the success he has had in developing one of the best of our state institutions.

A letter was read from Dr. Conaway, President of the State Society, asking endorsement of certain propositions for the work of the coming year. These were approved by the society.

SUSSEX COUNTY

H. D. Van Gaasbeek, M. D., Reporter

The Sussex County Medical Society held its Annual Meeting at Newton, December 28, under the presidency of Frederick H. Morrison. In the absence of the regular secretary, Dr. Pooley served as substitute.

The important paper of the day was presented by Mr. McDonald, of the State Health Department, Trenton, on the subject of "Diphtheria Prevention". One excellent feature of his presentation was a discussion of the economic aspect of preventive medicine, as such work affects the family physician, demonstrating the fact that the private practitioner gains rather than loses, financially, by promoting preventive medicine.

At the conclusion of this discussion, the society adopted a resolution specifically endorsing the State-wide Antidiphtheria Campaign now developing.

Dr. Walt P. Conaway, President of the Medical Society of New Jersey, gave a short address on the work of that organization; Dr. J. Bennett Morrison, Recording Secretary, amplified the president's talk—dwelling particularly on the work of county medical societies and methods for developing strong and effective organizations; and, Dr. Reik, Editor of the Journal, reported on the activities of his office, and upon the steady growth of the Woman's Auxiliary movement.

Under the head of new business, the society endorsed the proposal of the State Board of Medical Examiners to seek enactment of a law for annual registration of physicians, and, also, authorized the formation of a woman's auxiliary to the county medical society. It was further decided to increase the number of meetings per annum.

Election of officers resulted as follows: President, Frederick H. Morrison, of Newton; Vice-President, Lamar Voorhees, of Newton; Secretary, F. P. Wilbur, of Franklin; Treasurer, Thomas R. Pooley, of Newton; Reporter, H. D. Van Gaasbeek, of Sussex.

UNION COUNTY

Summit Medical Society

W. J. Lamson, M.D., Secretary

The regular monthly meeting was held at Wallace Pines, December 27, 1927, at 8.30 p. m., Dr. Morris presiding, and Dr. Moister entertaining. Among those present were Drs. Baker, Bowles, Byington, Burritt, Clark, Dengler, Disbrow, Hallock, Keeney, Krauss, Lamson, Larrabee, Meeker, Meigh, Milligan, Moister, Morris, Pollard, Prout, Reiter, Smalley, Tator, Tidaback and Wolfe; and, as guests, Dr. Macpherson of Millburn, Dr. Allis of Basking Ridge, and Dr. Imbleau of Unionville.

Dr. Falvello was dropped from membership in the society on account of removal from Summit.

Dr. Elwood H. Macpherson, of Millburn, was nominated for membership.

The paper of the evening was read by Dr. Moister, on "Diet and Reproduction". He gave a resumé of the work done to date on the vitamins, and described their different properties and effects: Vitamin "A" influences growth and resistance to infection. It is present in milk, butter-fats, egg-yolk, cod liver oil, etc. Vitamin "B" is soluble in water, and its absence may cause Beri-Beri or polyneuritis. It exists in rice-polishings, tomato, spinach, etc. Vitamin "C" occurs in citrus fruits, tomatoes and carrots; its absence causes scurvy. Vitamin "D" is found in cod liver oil, and fresh oils, butter-fat, etc., and its absence causes rickets.

It was with the newer Vitamin "E" that the paper chiefly dealt. It has to do with reproduction, and its absence affects fertility. It aids in the assimilation of iron, and is found in lettuce leaves, egg-yolk, beef-muscle, etc. Much can be accomplished in producing normal healthy babies by a properly balanced dietary for the prospective mother. After the fourth month of pregnancy the caloric intake should be increased by about 20%, with adequate proteins, such as meat, milk and eggs. Calcium, phosphorus and iron are necessary in the diet to insure proper development of the fetus, and a generous supply of Vitamin "E" should be insured.

Tender Morsel.

"My poor man," said the prison visitor, "do let me send you some cake. What kind do you prefer?"

"Any kind, ma'am," said the convict, "so long as it's got a file in it." —Good Hardware.

"And you're sure you realize the difference between driving an ambulance and driving an ordinary car?"

Applicant: "Sure. When y're drivin' an ambulance y' gotta go back an' pick 'em up." —Notre Dame Juggler.

Hubby (reading)—"Here's a doctor who says we should abolish the corset."

Wifey—"Is it possible men have been wearing corsets?"

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MEDICAL EXPERT TESTIMONY

WILLIAM ELMER BROWN, JR.
Counsellor-at-Law
Atlantic City

In these times when it is impossible to know everything, but becomes necessary for success in any vocation to know something of everything and everything of something, the expert is more and more called upon as a witness both in civil and criminal cases. In these days of specialists, their services are often needed to aid the jury in their investigations into questions of fact relating to subjects with which the ordinary man is not acquainted. In our courts as they are now constituted, I think I am safe in saying that in half the cases presented to the jury the evidence of one or more expert witnesses becomes a very important factor in a juror's effort to arrive at a just verdict.

The normal function of a witness is merely to state facts within his personal knowledge, and under ordinary circumstances his opinion or conclusion with respect to matters in issue or relevant to the issue cannot be received. An exception to this general rule is that of a skilled or expert witness. A skilled witness is permitted to state facts known to him because of his special knowledge and experience, or his inference from facts observed by him, where the matter involved is such that persons without his special training could not observe intelligently or draw correct inference.

The competency of the witness with respect

to knowledge, and also with respect to special skill or experience, is a preliminary question to be passed upon by the court before the testimony is received, at least where objection is raised to the competency of the witness. A decision that an expert or skilled witness is competent involves no adjudication as to his credibility, but the weight of his statement, no matter what his skill, remains for the jury.

Speaking of the proper scope of such testimony one authority on the subject has said:

"A witness who is shown to the satisfaction of the court to be a competent physician or surgeon may state facts known to qualified members of his profession, as the effect, extent, and tendency of professional knowledge regarding certain matters; what ligaments a particular surgical operation severs, what are the vital parts of the body, the symptoms of a given disease or injury in body or mind, the usual period for recovery, and the chance that it will occur; what certain medical facts indicate; the effects commonly produced by age, death, disease, drugs, or intoxicants, emotions, injury, poison, or a surgical operation on the body or mind of a human being. Definite possibilities or probabilities as to whether a certain force or other cause may produce a given physical result, or that a given disease or injury will induce other troubles, will be permanent, followed by recovery, or require a certain length of time, may be stated as facts where no especial exercise of the reasoning faculty is involved."

It has also been stated as follows:

"In the field of medical knowledge, a wide range is necessarily allowed in the reception

of the inference of observers and the judgment of experts. A person skilled in matters of medicine or physiology may state his inferences or judgment with respect to the physical conditions of another person, and what certain observed conditions indicate; as to the existence of a disease or injury; or as to the character of an injury. A physician may state his diagnosis of a disease, as of bodily, mental or nervous symptoms; the occurrence of a change; the stage of development of a disease, the proper treatment to be administered, and the probable effect of a lack thereof; or whether certain treatment was proper, necessary, or sanctioned by medical usage. The witness may state the effect of injuries and is also permitted to state the effect of given conditions or occurrences, on the body, mind or nervous system of the person affected or the extent and character of the disability resulting therefrom. Whether certain conduct is consistent with having received certain injuries, and whether a given operation was necessary, may be stated by a sufficiently qualified witness, who is also permitted to state his inferences as to the cause of certain injuries, of an observed physical condition, or of the death of a person, or as to how recent a stated cause was, or in what order stated causes occurred. A physician who examined a deceased person immediately after death has been permitted to state that, from the nature, condition, and position of the wounds of a deceased, he was of the opinion that deceased was lying down when such wounds were received. Statements have also been received from such a witness as to whether certain detailed occurrences would be natural, sufficient, probable, or possible cause of a certain physical result, or of death, although the witness cannot state his opinion whether they actually produced it. So also a medical witness may state what would be a sufficient cause for a given result, whether a given condition could have resulted from a specified injury or neglect, or would be likely so to result, or could have been caused by a certain weapon. The witness may state what he would judge was the cause of certain symptoms under given circumstances; which among several possible causes was the probable or

proximate one. A medical witness has been permitted to state whether an injury resulted from a burn or a cut; was made with a sharp instrument or torn; or could have been inflicted, in a way described, and also whether any injury was self-inflicted, although such a statement is not admissible in all cases."

A medical observer should be guided entirely by his professional training and experience in dealing with a given case. An observer cannot use as facts in giving his inference the statements of others, although such others are medical men, or members of the family, unless such statements are shown to have been true. Nor can a medical expert base his judgment in part on conversations with other experts.

Testimony by a medical witness as to physical condition is not rendered incompetent by reason of the fact that the knowledge of the witness was acquired at an examination made for the purpose of qualifying him to testify, but in such case the witness must base his testimony solely on the examination made by him and not upon statements in the nature of self-serving declarations made by the patient during his examination.

Probabilities are proper to be considered in reference to an existing physical condition, and a medical witness may be permitted to state the probable effects of disease, injury, or other conditions observed by him. The statement may relate to such matters as the permanence of the conditions observed by the witness, or their probable duration and liability to recurrence, and the chance of recovery of the person affected. So also the statement of a medical witness as to the probable result of a certain treatment may be received. While absolute certainty of statement is not required, a mere conjecture or speculation of the witness is excluded, nor should he be allowed to state future apprehended conditions.

The form most commonly used in the examination of experts is by the use of hypothetical questions. The expert is asked what would be his judgment upon all or any prescribed part of the facts, as to which evidence has been properly received, or which have been admitted assuming that they are

true; provided that a sufficient number of facts are assumed to enable the witness to give an intelligent opinion. The witness having no facts in mind as to the result of observation, it is in this way alone that a proper basis for a reasonable judgment can be furnished, and the witness cannot add to the hypothetical questions facts within his own knowledge and not in evidence. The question should be so framed as to reflect the theory of the party propounding it, as shown by the facts admitted or proved, and must confine the opinion given to the likely or probable result of the combination of circumstances assumed. The question should place before the witness sufficient facts to enable him to give a judgment which will be of value to the jury; and indeed it has been regarded as necessary that the question should assume all material facts relating to the subject on which the judgment of an expert is sought.

The answer to a hypothetical question must be based on the hypothesis stated, and should not be argumentative, conjectural, or indefinite, although a tendency to prove certain matters may be stated as the judgment of the witness upon a hypothetical case. An answer which involves a conclusion rather than an opinion is improper, but if the answer really expresses an opinion, it is not necessarily objectionable because stated in the form of a conclusion.

The judgment of an expert is of value precisely in accordance with what there is back of it. Every proper test should therefore be applied. Being hypothetical, it stands or falls with the existence of the facts upon which it is predicated. But even though the facts hypothetically stated are found by the jury to exist, they may still refuse to credit the judgment which the expert has formed from them, because unwilling or unable to do so. They may find that the facts are true and the reasoning false, or that while the facts justify his inference they are equally consistent with another.

The weight to be given to opinion evidence in any case, within the bounds of reason is entirely a question for the determination of the jury, taking into consideration the intelligence, learning and experience of the wit-

ness, and the degree of attention which he gave to the matter. The rule that the credibility of witnesses is a question for the jury applies with full force to witnesses who testify as to matters of opinion, and the opinion of the expert, although upon the precise point to be passed upon by the jury, does not relieve them of the power and consequent responsibility of deciding, and they may believe a less technically trained set of witnesses.

The general uncertainty and persistent disagreement of authority on many lines of professional and scientific inquiry, the fact that this class of evidence deals so largely with the problematical and the conjectural, and the consideration that there are other elements of unreliability arising from human frailty, bias, loyalty to one's employer, pride of opinion self-interest, or the heat engendered by controversy, which more or less unconsciously warp the mind of the witness, have caused courts of the highest eminence to feel that experts are frequently rather the hired advocates of the parties than men of science placing their special experience at the service of the cause of justice. Still, it cannot be doubted that in many cases expert evidence must be accorded that measure of respect which is due to a class of evidence the use of which is absolutely indispensable.

REHABILITATION OF THE PHYSICALLY HANDICAPPED

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The program of the State of New Jersey for rehabilitation of the physically handicapped has for its aim the conservation of man power in industry. Through the establishment of 6 comprehensively equipped rehabilitation clinics throughout the state, the disabled worker is assisted in returning to his former employment with less chance of having disabling physical or mental handicaps.

Disabled persons that are eligible for rehabilitation are drawn from all walks of life. They sustain their handicaps and crippling deformities as the result of street and home accidents, from congenital and acquired disease, and, chiefly, as the result of industrial accidents. When it is realized that 40,000,000 people in this country are engaged in gainful occupations and that in 18 states alone over 800,000 accidents occur annually, of which at least 10-15% are left with permanent disabilities which may prevent them from returning

creased through disease and accident, many of these being destined for the human scrap heap.

Some industries take back their injured employees and attempt to place them at lighter jobs. Often these jobs are too soft, so that they rob the men of ambition and incentive, cause them to become resentful and unproductive, and they finally slough off as undesirable. Or, they may be given work beyond their capacity and must per force soon give it up. Yet, the majority of these disabled per-



Petro unemployed 19 months, claimed inability to work. Admitted to Curative Workshop March 21, 1927. By process of occupational therapy, Petro on April 13, 1927, training on manual labor.

to their previous employment, we readily see the vastness of the problem of the industrial handicap.

The man with an arrested tuberculosis who is rejected from one job to another on account of his physical condition, the disabled worker who is unable to continue at his work on account of heart disease, the men with flat feet or hernias, and others seriously disabled through industrial accidents; these constitute the great army of industrial handicaps. Each year the number of incompetents is in-

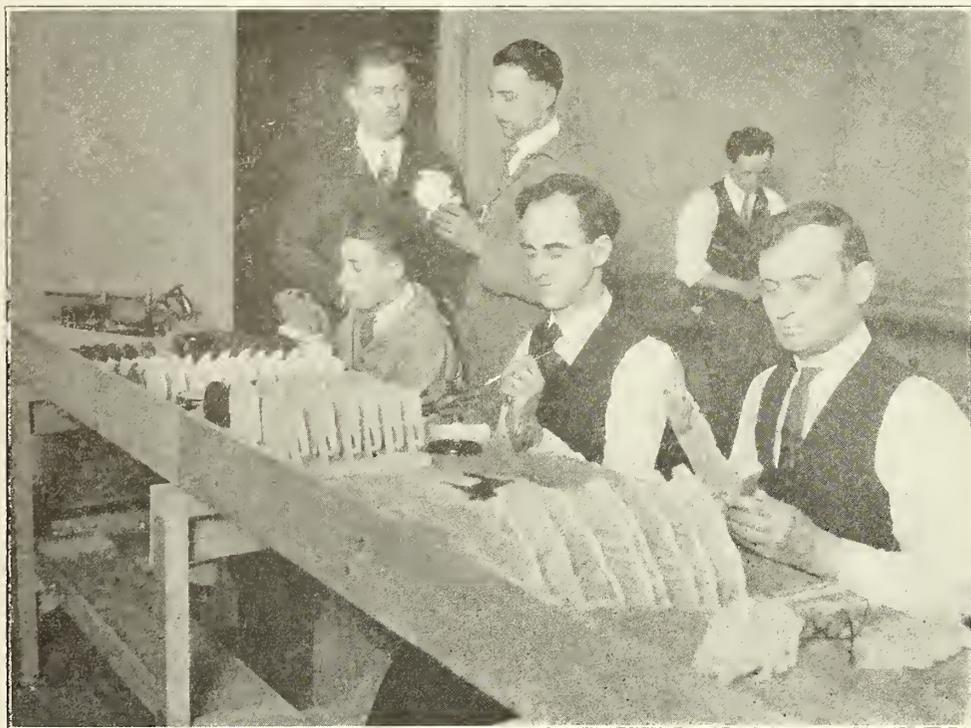
sons have sufficient capacity to undertake work that will give them a living wage if they were properly advised and guided. Through proper vocational training their full mental energy and remaining physical capacities could be developed in more useful occupations than those often delegated to them; such as flagmen, messengers, watchmen and janitors.

It is true that these men do receive compensation payments during the time of their disablement, and for permanent disabilities should they sustain the latter. However, the

economic stress is great and the weekly dole is rarely adequate. Compensation payments for permanent disabilities are soon spent and the injured worker is left without money with no one to advise or guide him. New Jersey does not feel that the tin cup and lead pencil is the answer to disablement. It believes that it is good business to salvage these men before allowing them to be thrown on the scrap heap of life, just as industry deems it good business to turn their waste products into assets. The comprehensive rehabilita-

The rehabilitation of a disabled person is considered effected when that individual has continued at a remunerative employment for a minimum period of 2 years, and this rehabilitation is effected in 3 ways: (1) By physical restoration. (2) By vocational training. (3) By placement.

The director of the clinic is charged with the responsibility of extending those medical services necessary for physical restoration, while the problems of vocational training and placement are directed by the vocational di-



Medical Director conferring with instructor relative to training.

tion services that New Jersey offers to these individuals is outstanding. It contemplates the functional restoration of the injured and handicapped, and their reestablishment in permanent remunerative employment. The clinic, through its close association with the Workmen's Compensation Bureau, employment offices, and the Departments of Education and Institutions and Agencies, is able to coordinate and utilize all of these services and facilities in executing a rehabilitation program.

rector or examiner. The medical services are: (1) Examination of compensation cases. (2) Treatment of rehabilitation cases. (3) Examination for vocational guidance.

Every claimant for compensation is examined by the medical director of a clinic prior to his hearing for the estimation of his compensation status. On this examination the director determines: (1) Termination of the injured's temporary disability. (2) The necessity for further treatment. (3) The extent of permanent disability. (4) The neces-

sity for change of employment and vocational rehabilitation.

The period of temporary disability is that period during which the injured worker on account of the nature of his injuries is unable to return to his work without damage to himself. The director is charged with deciding when that period ends and of advising the compensation referee that the man is or is not able to return to work. If he is unable to return to work, and further treatment is indicated, the compensation referee is so advised. After treatment is terminated and sufficient time has elapsed for the ordinary sequels of injury to have disappeared, the man is examined to see if he is left with any permanent disability, such as amputations of important members, stiff joints, paralyzed muscles, and any other residual damage that may constitute a functional, vocational, or economic handicap. If the permanent disability is extensive, so that the injured worker is unable to return to his former employment on account of these disabling injuries, he is referred to the vocational director for vocational rehabilitation. He is then interviewed and surveyed to determine: (1) The necessity for change of employment. (2) The nature of employment for which he is best fitted. The medical director assists in this survey by making a complete examination for vocational guidance in accordance with the following form. Through this form the vocational examiner is assisted in the selection of suitable training or employment by determining the handicap's physical and mental resources and limitations.

Date _____

Name of Clinic—New York
Vocational No. _____

1. Name _____
 Address _____
 Age _____ Former occupation _____

2. Referred by Vocational Division _____
 Reason— _____

3. Classification of handicap _____
 Neuro-psychiatric _____ Surgical
 Tuberculosis _____ Medical
 Cardiac _____ Visual
 Orthopedic _____ Auditory

4. History— _____

5. Diagnosis— _____
 a. Specific handicap— _____
 b. Contributory—or other defects— _____

- 6. Physical aptitudes
 - a. Height-standing Seated
 - b. Weight
 - c. Thoracic coefficient
 - d. Type
 - 1. Robust
 - 2. Muscular
 - 3. Cerebral
 - e. Stump
 - 1. Part
 - 2. Length
 - 3. Movement
 - 4. Power
 - 5. Cannot wear Prosthesis
- 7. Psychological aptitudes
 - a. Intelligence Substand'd Av'ge Ab've av'ge
 - b. Re'ct'n time slow quick
 - c. Emotion stable unstable
 - d. Morale depressed optimistic
- 8. Recommendations
 - a. Treatment Yes No
 - Approximate time
 - b. Employment Standing seated
 - light mod. h'vy. H'vy Man'l
 - c. Specific employment—
 - d. Specific training

The second service the clinic administers is that of treatment. An example of the type of treatment administered is as follows: A watchmaker who gets an infection in his hand requiring incision and drainage, and leaving permanent disabling stiffness to the hand and fingers, must often reconstruct his whole life. Two courses may be open to him, depending on the extent and severity of the disability. After discharge by his physician or hospital he will seek employment at a very much reduced earning capacity which will necessitate readjustment of his mode of living, or a lowering of its standard, or he will seek further medical aid with a view to improving the physical condition of his hand.

It is possible by a course of intensive after-treatment through physical methods, followed by development of the remaining physiologic functions of his hand, for the handicapped man to return to his former vocational employment. This should be the primary goal aimed at by the rehabilitation service. It is far more costly to the person's morale, health and well-being for him to change his vocation, laboriously acquired, especially if it is at a reduced earning capacity and lowers his standard of living. It seems more rational that every medical and physical method shall be employed to the end that his physical disability may be overcome and allow him to return to his former work. It seems more

economic to follow such a course than the more expensive proposition of retraining. It must be remembered that the disabled civilian is, as a rule, older than the disabled soldier, and that experimentation is more costly to the state as well as to the individual.

The importance of after-treatment in all cases of injury received its greatest impetus through the reconstruction hospitals during and after the World War. Development of this branch of surgery, in which the maximum functional restoration of the injured part is the objective, has been very marked in the past 8 years. In this development, the rehabilitation clinics have played a major rôle. By the treatment of thousands of cases, they have demonstrated the efficacy of this program of treatment, which embraces the normalizing of human tissues and members through corrective surgery, physiotherapy, and physiologic use of the affected parts. It has had an educational effect on the medical profession, on hospitals and other institutions, and many of these agencies have installed equipment for the proper treatment of injured persons.

Treatment in the clinics has been confined to corrective surgery and after-treatment. No first aid or initial surgical treatment is conducted. At all times an ethical professional attitude has been maintained. The confidence and coöperation of physicians and hospitals is reflected in the large number of cases referred by these agencies. Of 7684 cases treated last year 4727, fully 60%, were referred by physicians or hospitals. On completion of treatment, the individual either makes restoration his own job or is referred to the vocational director for training or placement. Some typical examples of the rehabilitation services are as follows:

(1) An Italian, in this country 6 months, lost all of the fingers except the thumb of the right hand. He worked as a laborer, could not speak English and could no longer do any laboring work. He was making \$24 a week before his accident. He was provided with a

prosthesis to replace his fingers and trained as an acetylene welder. At the end of 8 weeks, work was found for him as a laborer at \$25 a week. At the end of 1 year he was making \$40 a week and had saved \$800. He returned to the clinic for further education in English and American citizenship.

(2) A painter, 35 years of age had several bone graft operations for an ununited fracture of both bones of the right leg. He was referred to the medical examiner as to employment indicated. It was advised that another attempt be made to consolidate the leg. This was done and the last operation was successful. The vocational director was then able to place him at his former occupation of painter.

(3) A butcher, 50 years of age was referred to the vocational director for an opinion as to the general type of employment. The man sustained a fracture of the spine and found prolonged standing a painful strain. This was overcome by providing him with a celluloid jacket and he was given his old job back again.

In addition to the medical and surgical services, our program contemplates the securing of prosthetic appliances for those that require them. These braces and artificial limbs are supervised at the clinics, for approval, and then the injured worker is assured of their being adequate. The patient is trained in the use of the artificial member and then it is made available for use. Of the amputated cases, leg amputations are easier to rehabilitate than are arm amputations. Every leg amputation should have, if the stump is of the proper type, an artificial limb. The same does not hold true for upper extremities. The artificial arm is a very poor substitute for the natural limb. In the lower extremity, stability is the most important consideration. In the upper extremity, mobility and coördination are the essentials. It is frequently found advisable not to suggest the use of artificial arms.

Of the large number of handicapped that yearly request our service, those complicated by some form of mental disorder, such as a psychoneurosis, are found most difficult to re-

habilitate. To facilitate the vocational adjustment of these individuals, treatment is given in the Curative Workshop attached to the clinic. Here all forms of light and heavy carpentry are performed, and painting and cabinet making may assist the injured worker in making his jump from a long period of idleness into effective employment.

Of the 7683 cases treated in the past year, 6433 were restored to their jobs without intervention of the vocational director. This job restoration was accomplished after varying periods of treatment: 5250 cases after 3 months; 727 after 6 months; and 656 after 9 months; while 1251 cases were turned over to the vocational director for training and placement as they were unable to make job restoration themselves.

Through this comprehensive program of examination and treatment, where job restoration is the objective, the clinic is able to restore the handicapped worker to his old job without much delay. When he returns to his job he is followed and checked up by the vocational examiner.

When it is realized that 7683 cases were rehabilitated it would seem that the program and procedure were quite justified. When it is further realized that of that number 2434 cases had such severe disabilities as to require treatment for a minimum of 3 months to 2 years, with often a period of treatment and observation prior to coming to the clinic of many months if not years, the program seems still more justifiable. The cost of maintaining a staff to provide employment for that group, or the cost of maintenance and training in new vocations for that number would be overwhelming.

SUMMARY

The program of the New Jersey Rehabilitation Commission for the vocational rehabilitation of the physically handicapped person contemplates the amelioration of the economic condition of all handicapped persons through physical restoration, vocational training, adjustment and placement. It guarantees the injured worker his return and absorption into society as an independent social and profitable economic unit.

ABDOMINAL MANIFESTATIONS IN CARDIOVASCULAR DISEASE

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The frequent occurrence of gastro-intestinal phenomena as the result of cardiovascular disease has occupied the attention of both gastro-enterologist and cardiologist for the past decade. The similarity of symptoms and of complaints made by patients suffering from myocardial failure and those with gastro-intestinal upsets have called into frequent use the employment of especially fine methods of diagnosis.

The gastro-intestinal crises of vascular origin have been discussed by Forbes¹, Vaquez², and many others. Recently, Hyman³ has demonstrated that the vomiting which occurs in auricular fibrillation may be due entirely to disturbances of circulation. Wenkebach and Winterberg⁴ have pointed out the occurrence of paroxysmal abdominal pain in certain cases of coronary artery disease. Weiss has shown that gall-bladder disease may be simulated by myocardial affections. Haas has reported several cases of acute abdominal conditions, in children, produced by acute rheumatic pericarditis.

The frequency of heart disease as a factor in abdominal complaints has been called to my attention several times during the past year. Most of these cases had run the gamut of gastro-intestinal observations with the usual x-ray studies and chemical analyses. In general, these patients gave a typical history suggesting conditions occurring in the gastro-intestinal tract associated with hyperacidity. The relief afforded by alkalis, and a careful selection in the diet, would render the patient so comfortable that diagnosis of a purely gastric condition would seem to be confirmed. Such relief, however, was usually short-lived and the patients would return with the same, or even increased, symptoms. A routine examination in 3 of the most severe of these

cases' revealed subtle disturbances of circulation; which upon subsequent closer scrutiny proved to be the etiologic factor. Prompt institution of specific therapy readily corrected the functional aspect of the cardiovascular disturbance, and a rather prompt clearing up of the gastric complaints followed.

Case 1. Mr. I. K., American, age 51, laborer. Had been complaining for the past year of gastric distress associated with a dull, burning sensation in the midepigastrium, which responded more or less effectively to alkaline powders. X-ray examination of the gastrointestinal tract, together with the usual laboratory data, prompted his physician to make a diagnosis of hyperacid gastritis, possibly neurogenic in origin. The patient continued to take alkaline powders whenever necessary, but for the last few months had noticed that in addition to the usual burning sensation in the epigastric region he now had some difficulty in breathing. This shortness of breath was rather marked on stair climbing and the "gastric" distress was no longer promptly relieved by his powders. He commenced to lose weight rapidly and in 4 months dropped from 185 to 160 lb., with a progressive increase in his dyspnea. He appeared for examination on August 23, 1927, when a very superficial examination demonstrated that the symptoms were cardiovascular in origin.

A brief resumé of the cardiovascular study follows: The patient was slightly (about 10%) underweight for this age and height group. Under the Dressler white light he showed a first degree cyanosis of mucous membranes. After a moderate effort test he showed more than the usual amount of dyspnea. To percussion the superficial area of cardiac dullness was appreciably increased. Apex impulse was readily localized in the sixth interspace beyond the midaxillary line. Heart sounds were clearly heard over the entire precordium. At the apex, the second sound predominated; while at the base, the second aortic was slightly accentuated over the second pulmonic. All valve closures appeared to be synchronous but of only fair tonal quality. The dominant rhythm of the heart was regular; apical rate 90 per minute.

All of the apical beats were transmitted through the radial artery; there was thus no pulse deficit. Vagal effects were readily elicited. The Rehfisch test was positive; the breath was held for a maximum of 40 seconds, with the fall of the pulse rate to 74 per minute. A rather soft, blowing systolic murmur was identified at the apex, and it had a short lateral transmission. After a moderate effort test the murmur became louder.

The lungs were essentially clear throughout; at neither base posteriorly could Mackenzie râles be heard. Neither the liver nor spleen were palpable, but there was a definite epigastric tenderness to palpation. No abdominal fluid or masses were demonstrable. There was no edema of the lower extremities.

Blood pressure reactions: Oscillations were recorded from the brachial artery by the Pachon method, as high as 180 and as low as 60; from the tibial arteries, 220 over 60. The Vaguez ratio was subnormal. The curve described suggested peripheral resistance in the arterial system. Clinical blood pressure levels were established as systolic 160 and diastolic 85.

Vital capacity estimation: The total volume of expired tidal air was 2000 c.c. recumbent and 2600 c.c. standing. The Myers ratio about normal. Based upon the patient's height of 71 inches, this is a reduction to 58% and based upon his weight of 160 lb. this represents a reduction of 57% of his theoretic standard. These figures may be taken as suggesting a very definite loss of myocardial reserve.

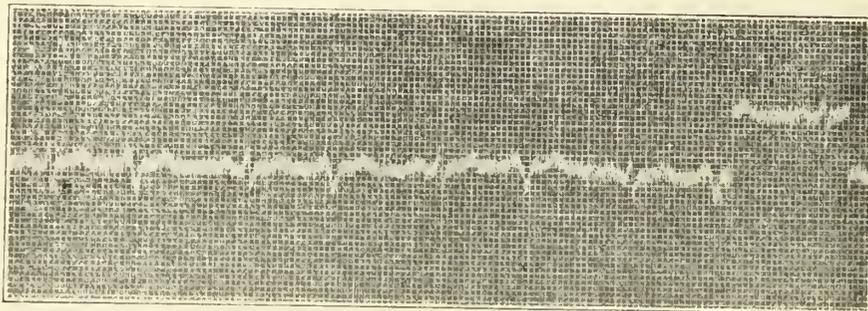
Fluoroscopic examination disclosed a moderately enlarged heart with a beginning aortic configuration. Movements and pulsations of the ventricles and great vessels were about normal for his age. On deep inspiration the pericardium stripped free from the diaphragm; no adhesions noted. The lung fields were essentially clear throughout except for a moderate clouding of the hylus. The diaphragmatic movements were equal and of good amplitude on both sides; no diaphragmatic adhesions noted.

Orthodiagraphic measurements showed the heart to be enlarged in all diameters; the diag-

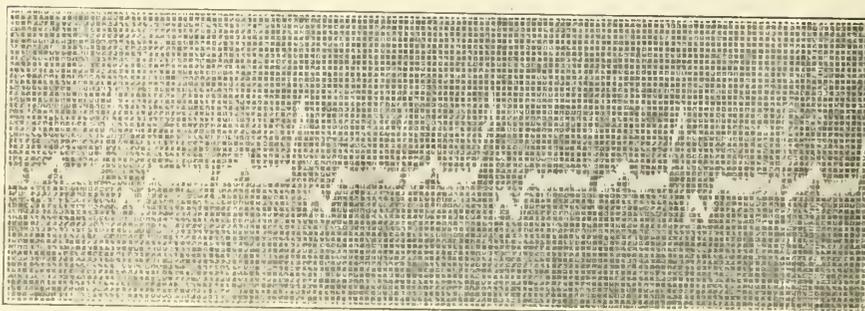
onal diameter measured 16 cm., and the aortic arch 9 cm.

Electrocardiographic studies revealed a hitherto unsuspected condition. Interpolated right ventricular extrasystoles were discovered, alternating with normal sinus beats. There was a definite right axial rotation of

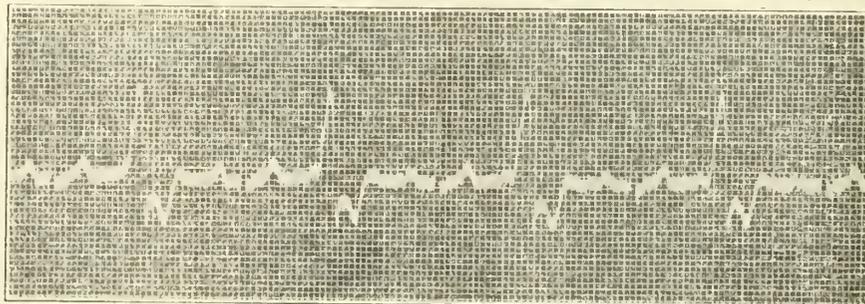
complexes were down in the first lead and upright in the second and third, indicating a right ventricular preponderance. There was no delay in transmission time of the complexes (0.08). The T waves were well formed and upright in all leads. Interpolated between each 2 normal beats were right ventricu-



Case 1.—Lead I.



Case 1. Lead II.



Case 1.—Lead III.

the heart; the normal beats showing no disturbance of conduction. A detailed analysis of the tracings follows:

The P waves associated with the normal beats well formed, and upright in all leads. The P-R interval 0.18 seconds. The QRS

lar extrasystoles, each of a similar configuration, suggesting a single ectopic focus of irritability.

Effort function test: The patient performed about 2000 foot pounds of work, with a rise in the pulse rate from 90 to 115. At the end

of 3 minutes the pulse was still elevated to 100, suggesting a definite loss of myocardial reserve, as previously noted.

The conclusions to be drawn from this study are that the patient was undoubtedly suffering from a myocardial affection of obscure etiology. The large dilated heart, absence of extreme valvular defects, moderately elevated blood pressure, general atherosclerotic changes in the vascular system, and the electrocardiographic evidence of focal irritability in the right ventricle, suggest a chronic progressive myosclerosis.

Treatment consisted of tonic doses of digitalis and theobromin, and complete rest in bed. At the end of 10 days the symptoms of epigastric distress had disappeared.

The second case is interesting in showing the very remarkable similarity that may exist between the symptomatology of upper right abdominal pain and coronary artery disease. These two conditions have been the subject of considerable study since the publication of Levine's paper upon the more than frequent discovery of coronary artery disease in cases coming to operation for gall-bladder affections. The rather characteristic radiation of both coronary and gall-bladder pains, their abrupt and violent onset, and the marked prostration that may accompany such attacks, with increased leukocytosis and slight rise in temperature, make differential diagnosis very confusing in those cases where the gall-bladder tenderness is not very marked.

Case II. J. B., male, age 54, Russian, insurance agent. For the past year he had been complaining of abdominal pain, particularly marked after noon meal. Pain in the beginning was probably epigastric, but in the last few months was definitely localized in the right upper quadrant. The patient was considerably overweight, with a very obese abdomen, which made proper palpation almost impossible. He had complained on this occasion of having become nauseated after the attack, and having vomited bitter, greenish fluid, suggesting bile. For the past week the pain had been of such severity that he had been forced to secure assistance on the street when the attacks had occurred. The pain

seemed to arise in the gall-bladder region, with radiation upward into the right chest and then into both shoulders. The attack lasted, usually, about 20 minutes, leaving the patient almost prostrated; they came on at first about 10 minutes after lunch, but recently had been occurring after most of his meals. His physician, suspecting a gall-bladder affection associated, perhaps, with other gastro-intestinal disease, had placed him on a special diet and alkaline medication. X-ray visualization of gall-bladder was not particularly successful, due either to obesity of the patient or to lack of excretion of the dye. The day before he was seen by the writer he had an attack of such severity that even morphin failed to control it. In listening to the heart sounds at this time, the attending physician was alarmed at their poor quality and advised a cardiovascular consultation.

The patient was seen on the following day and a brief resumé of a cardiovascular study made at that time, showed electrocardiographic changes usually associated with coronary artery disease.

There was marked inversion of the T waves in both leads I and II, with a left axial rotation of the heart. The QRS complex was delayed to 0.12 seconds. The general physical examination revealed but little other information, save that the orthodiagraphic measurements of the heart showed a slightly widened aorta and an increased diagonal diameter of the ventricular area. The blood pressure, vital capacity, and function tests were essentially normal for this age period.

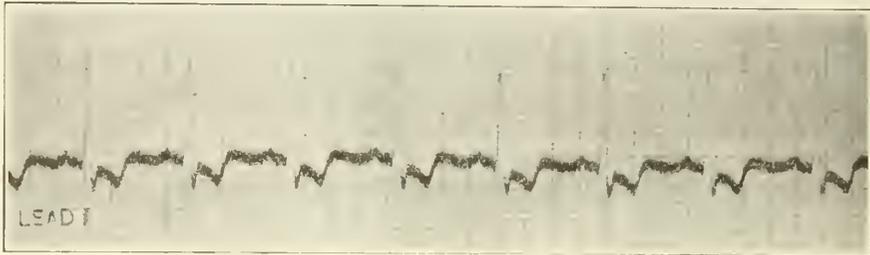
A diagnosis of coronary artery disease with associated degenerative myocardial mischief was made, and the patient was placed upon the routine Reisman coronary dilatation therapy, with ephyllin and nitroglycerin medication. He was given a period of bed rest for 10 days, during which time he had no subsequent attacks. This phase of the history has been admirably discussed by Wenkebach. On a moderate amount of exercise and with complete rest for 1 hour after each meal, the patient complained of no further attacks and for the past 10 months has had but 1 paroxysm of

pain, which was unquestionably due to the effort entailed by carrying a heavy bag.

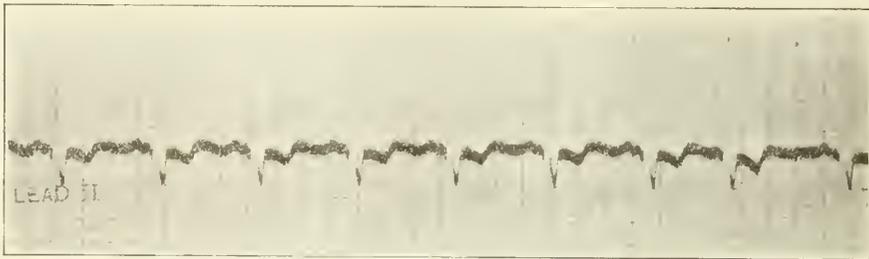
The third case demonstrates the value of a thorough physical examination in all cases of so-called nervous vomiting in women.

Case III. Mrs. B. G., age 36, Jewish, housewife. Had been complaining of "nervous indigestion" since the birth of her last

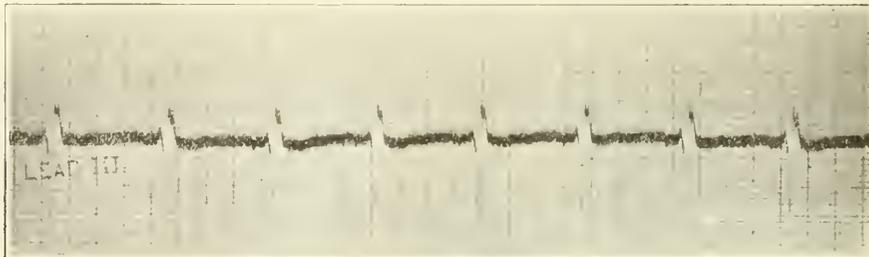
tablets), on the recommendation of a neighbor, but the vomiting seemed to become more intense. The attending physician, who was then called, noted that the pulse was very irregular and suggested cardiovascular examination; he stated that he had noted an irregularity for some time, but inasmuch as the patient's pulse had never exceeded 60 to 70



Case 2.—Lead I.



Case 2.—Lead II.



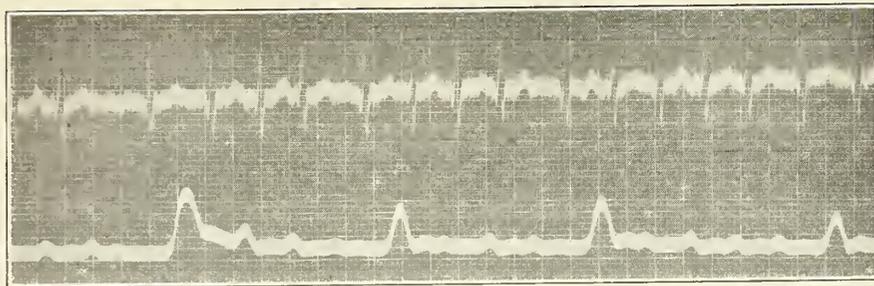
Case 2. Lead III.

child about 2 years previously. More recently these attacks have ended in periods of nausea and occasional vomiting. During the past 2 weeks the vomiting occurred once or twice a day without relation to food or any other factor that could be ascertained. The usual dietary restrictions and bromide medication for the "nervousness" failed to alter the course of the symptoms. In desperation, the patient took a large dose of aspirin (4 or 5

beats per minute he had disregarded the possibility of any cardiac contributory cause.

Examination revealed a very rapid auricular fibrillation with a marked pulse deficit.

The graphic records in this case are especially interesting. The marked pulse deficit gave the impression that the pulse rate was slow and somewhat irregular, when, as a matter of fact, the actual ventricular rate varied from 150 to 170 contractions per minute.



Case 3.—Lead II.—Radial

X-ray examination of the heart showed it to be somewhat enlarged, with a mitralized configuration. Blood pressure reactions, vital capacity estimations, and other tests, readily showed a somewhat decompensated circulation. Hyman has recently reported several such cases, classifying them under "idiopathic vomiting, occurring in rapid auricular fibrillation with marked pulse deficit". The patient was promptly put to bed and digitalized by the Eggleston method. The radial pulse rate rose during the treatment to about 120, when the deficit disappeared and the symptoms quickly subsided.

SUMMARY

The importance of a thorough physical examination has been emphasized time and time again, by many writers. Indeed, many articles have appeared recently warning against the "one track mind" engendered by this age of intense specialization. Affections in various parts of the human body may involve a symptomatology usually associated with that belonging to some other part.

The 3 cases presented herewith are interesting in demonstrating how misleading gastro-intestinal complaints may be. In all of these cases the cardiovascular system was at fault, and the conditions were only recognized after treatment directed toward the apparent cause had failed and attention was directed toward the heart and circulation.

A careful examination which utilizes all of the modern equipment for study of the heart and blood-vessels was essential for a thorough understanding of these conditions.

The electrocardiographic and polygraphic studies, the orthodiagram, the vital capacity

tests, the effort function response, and other accepted diagnostic procedures, all served to render more clear these cases which formerly would have been very confusing to the clinician.

These 3 cases were selected with a view to presenting the most common gastro-intestinal symptoms associated with cardiovascular disease. The first was an unsuspected myocardial failure which was rapidly relieved through the information secured by complete examination; the second case was unquestionably saved from a gall-bladder operation by the evidence secured from the electrocardiogram; and, finally, the third case responded, as many of these cases will, to prompt digitalization.

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PREOPERATIVE AND POSTOPERATIVE TREATMENT OF DIABETIC PATIENTS

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As is well known, only 4 or 5 years ago operation upon a diabetic patient was a very unwelcome task because of the too frequent occurrence of disastrous results in spite of the surgeon's best efforts. Since the discovery

of insulin, and with utilization of present day methods of management of such patients before and after operation diabetes has become a rather minor surgical obstacle.

In reporting the cases which I have collected from the ward service of Dr. Aaron Parsonnet during the last few months I will try to outline briefly the principles by which we were guided, methods of management followed, and the end-results obtained. Up to date, our series is rather small but as our surgeons are beginning to recognize the necessity of consulting the medical man in this type of work, we will be able in the near future, to add to this series, and possibly present a sufficient number of cases to carry a greater amount of conviction.

The principles by which we were guided can be outlined briefly:

(1) Reduce blood sugar to as near normal as possible, by the use of diet and insulin.

(2) Insure a store of glycogen in the tissues at time of operation.

(3) By the use of insulin and injections of glucose prior to or during operation, to carry patient through operative procedure without occurrence of acidosis.

(4) After operation, to guard against hyperglycemia with its attendant acidosis, or hypoglycemia due to lack of food or excess of insulin.

The procedures we followed will become evident from the presentation of the cases, 9 in all. Our patients were all females, and ranged in age from 39 to 65. Admitting surgical diagnoses were: Fibroid uterus, 3; ventral hernia and fibroid uterus, 1; cholecystitis, 1; cholecystitis and empyema of the gall-bladder, 1; left renal calculus, 1; twisted ovarian cyst, 1; chronic appendicitis and cholecystitis, 1.

Some were known to their doctors as diabetics at time of admission, while others were discovered in course of the routine hospital examinations of the urine. The severity of the diabetes varied a great deal: One patient

on admission showed 6% sugar in the urine and blood sugar of 285 mgm. per 100 c.c. of blood. The lowest showed a trace of sugar in the urine and blood sugar of 171 mgm. per 100 c.c. of blood.

Treatment of any case depended a great deal on whether the patient was acutely ill and had to be operated on immediately, or the operation could be safely postponed for several days. For emergency operations our method was as follows: The blood sugar was determined as soon as possible. Intravenous or hypodermoclysis of 500-1000 c.c. of 5% glucose in which 1 unit of insulin for each gram of sugar is added, was administered prior to, during, or immediately following the operation. About 3 hours after operation another hypodermoclysis of 500 c.c. of 5% glucose with 15-20 units of insulin. When the patient came out of anesthesia and there was no evidence of coma or marked acidosis, the treatment was the same as for those patients who were given the proper pre-operative treatment. In cases where the operation can be postponed it usually takes from 3 to 7 days to prepare patient and generally there is very little risk as concerns outcome.

First we determine the amount of blood sugar and also the amount of sugar in the urine excreted in 24 hours. A diet of 1200 calories C-50, P-50, F-90; or 1500 calories, C-70, P-70, F-110. The amount of insulin is guided by the number of grams of sugar in the urine excreted in 24 hours and amount of sugar in the blood. Generally, one unit for 2 grams of sugar. If the amount in 24 hours is 60 gm. we give patient 30 units of insulin in divided doses; 3 doses of 10 units each 20 minutes before meals. Urine is examined daily. In most cases no change of diet or amount of insulin was necessary. Our usual experience has been that patients became sugar free within 3 to 7 days. If sugar persisted in the urine, the amount of insulin had to be increased while maintaining the same diet. Blood sugar determination is obtained prior to operation. If gas-oxygen-ether be

used for anesthesia, hypodermoclysis of 500 c.c. 5% glucose with 15-20 units, should be given 2 to 3 hr. after operation and repeated every 4-6 hr. until patient is able to take fluids by mouth. Then, oatmeal water gruel, orange juice or diluted milk may be given by mouth with sufficient amount of insulin to insure its utilization. Water is given freely. The urine is examined frequently for sugar and acetone, and blood sugar is again determined. On about the third or fourth day, a definite diet of 1200 to 1500 calories as above described is given, with 10 insulin units t.i.d. Amount of insulin is again guided by the sugar in the urine in 24 hours and amount of sugar in blood. Care is being taken to give foods which are easily digestible. In these cases the urine is examined before each meal. After a few days, we usually find that the urine is sugar-free and we then begin to decrease the amount of insulin. First we eliminate the noon dose, then the number of units for the morning and evening meals is decreased till in many cases insulin can be discontinued entirely.

RESULTS

- (1) No diabetic coma or even marked acidosis in any of the cases—*independent of anesthetic used.*
- (2) All of the patients were comfortable and on third or fourth day were able to take the prescribed diet.
- (3) No case of hypoglycemia was encountered.
- (4) Wounds healed by primary union in almost all cases within the same time as compared with nondiabetics, with the exception of the case of ventral hernia which was in the hospital about 6 weeks, and 1 of renal calculus where a pyelotomy was done and patient stayed in the hospital 7 weeks.
- (5) Five of the 9 patients were discharged with diets of 1500 to 1800 calories, with no insulin, urine sugar free, blood sugar 120-154 mgm. per 100 c.c.; the other 4 still needed a certain amount of insulin and were referred to their own physicians for further treatment.

IMPORTANCE OF RADIOGRAPHING BONE AND JOINT LESIONS

C. A. PLUME, M. D.,
Succasunna, N. J.

(Retiring President's Address at the annual meeting of the Morris County Medical Society, September 27, 1927.)

It would seem unnecessary to stress the importance of x-ray examination of bone and joint lesions, whether they be traumatic in origin or the result of disease, for it was in this field that the Roentgen ray first proved its value and usefulness to the physician, but too often this procedure is neglected.

It should be an invariable rule to secure an x-ray picture of injuries in any case where you are positive that you have a fracture, and also in cases where there is the least suspicion of a possible fracture; especially is this applicable from an economic standpoint in this day and age when juries are so prone to render verdicts for large amounts of money in damage suits and suits for malpractice. For instance, assume that a man has been injured in the shoulder and treated for a "sprain" for a period of 6 to 8 weeks, without being radiographed, and the victim becoming impatient consults another physician who x-rays him and finds either dislocation or fracture; in such case the patient would be justified in harboring grievance against the first physician and in seeking monetary damages through the courts. A case of this kind came to my attention, although I have not heard that the patient sought to collect from the first fellow who treated him, where the patient had been treated for a sprain in the shoulder, without x-ray examination, for sometime, and then becoming dissatisfied consulted another physician who immediately obtained an x-ray picture which showed an impacted fracture of the surgical neck of the humerus.

Just this week a man walked into a doctor's office saying he had sprained his wrist sometime ago and that it did not seem to be getting well; while it did not seem to be red or swollen, yet he could not use it without pain.

This doctor said that he could not see through the skin but that the x-rays could, and a radiogram disclosed that he had an incomplete fracture of the lower end of the radius. This type of fracture suggests to me the importance of a good x-ray picture as compared to fluoroscopic examination. In the first place, your fluoroscope will not show the bone detail, and very often an incomplete fracture will be overlooked. In the second place, you are unnecessarily exposing yourself and the patient to the x-rays; and this would also apply to attempts to align complete fractures under the fluoroscope. A better procedure than the fluoroscope is to take a number of pictures and manipulate for better alignment, if necessary, between pictures until you secure a picture showing that you have obtained the desired result.

In case of green stick fractures, I think it a good procedure to get the bone in as good alignment as possible and then to apply a cast, and, before the cast hardens to take another picture, so that if the alignment is not quite satisfactory you can manipulate it again by bending or pressing on the cast. This lessens the danger of making a complete fracture out of one of incomplete or green stick type. These green stick fractures also suggest to me the importance of x-ray examination of all injuries to children where a joint is involved, for often a child will be injured and treated for a sprain when in reality he has a partially dislocated epiphysis which if not properly treated will subsequently result in deformity.

In radiographing any of the bones, the long bones especially, I can not stress too strongly the importance of making 2 pictures, taken as nearly as possible at right angles to one another. Quite often, in one view the fragments will appear to be in perfect alignment, but a second picture taken at right angles to the first, shows a considerable space between the fragments and perhaps some over-riding. This is especially so in fractures of the humerus and femur. I remember one such case in a very stout woman who had broken her arm and the first picture, which was taken in an anteroposterior position looked as though the fragments were in perfect alignment, but

when we got the lateral view it showed an oblique fracture with considerable space between the broken ends. In this case it was decided that, because the ends would not approximate, there must be muscle tissue in the way, and this decision was verified by an open operation. I think this is a type of fracture where the x-rays are invaluable. If this woman had been treated for 6 weeks or more in splints she would have had all of that suffering for nothing, because when the splints were removed the bone would have been found ununited, and she would then have been compelled to go through the operative procedure and a lot of time would have been lost, to say nothing of the suffering.

I would next call your attention to x-ray pictures of the wrist. Here, again, it is quite necessary to have both views, lateral and anteroposterior. In the lateral you may discover that the semilunar or some other of the carpal bones has jumped out of place. In the anteroposterior picture be sure to count the carpal bones, and be sure you don't see an extra bone; if you do, look them over more carefully and see if the scaphoid has not been broken and produced the appearance of an extra bone in the carpus. This is a frequent mistake made in the reading of x-ray pictures of the wrist.

In fractures of the upper end of the ulna, a good look at the head of the radius will determine whether it has been dislocated. Likewise, in fractures of the lower end of the tibia, if you find there is some over-riding of the fragments, and do not see any fracture of the fibula, take another picture of the upper end of the fibula, for 9 times out of 10 you will discover a fracture of the shaft of the fibula in its upper third.

In reading pictures of injuries to the hip joint, it is very often difficult to determine an impacted fracture of the neck of the femur, but if you have studied pictures of a normal hip joint you will have noted that the under surface of the neck of the femur and the upper edge of the obturator foramen form a perfect arch. If, in a picture of an injured joint, you find this arch distorted you will, in all probability, have a disturbance in the neck of the femur.

ELECTROTHERMIC METHODS, ROENTGEN RAYS AND RADIUM IN THE TREATMENT OF MALIGNANT DISEASES OF THE EYE, EAR, NOSE AND THROAT

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Montclair, N. J.

(Read before Section on Eye, Ear, Nose and Throat, of the Academy of Medicine of Northern New Jersey, at meeting of October 10, 1927)

INTRODUCTION

I wish first to express my appreciation and thanks to Dr. Henry C. Barkhorn for the interest he has shown in the treatment of certain malignancies. As you know, it is by his request that I am here to discuss with you malignant diseases of the eye, ear, nose, and throat and the technic of treatment by electrothermic methods, Roentgen rays, and radium. Before entering upon preparation of this paper it appeared to be a simple matter to cover the subject but it was soon found that the discussion would have to be limited to some of the more common malignancies because of limited time. This paper will be limited, therefore, to the consideration of malignant diseases of the eye, ear, nose, nasal accessory sinuses and the mouth, including the lip, tongue, tonsils, buccal surfaces, and larynx.

ELECTROTHERMIC METHODS

Unfortunately, as in other branches of medicine, we find here a multitude of terms used to designate one and the same procedure; surgical diathermy, fulgeration, surgical thermopenetration, desiccation, endothermy, endothermy knife and radio knife. If we are to use the term endothermy it must be preceded by the word surgical, as is done with reference to diathermy. To my mind there are some very good reasons why all such terminology must eventually give way to "Electrothermic Coagulation", a term which at once conveys to anyone's mind the fact that there is production of heat by an electric current of sufficient intensity to coagulate the tissues to which the current is applied. Furthermore,

2 Philadelphia physicians have probably had most to do with broadcasting the details of this treatment, and for approximately 20 years they have called it electrothermic coagulation; I have used the same term during the past 12 years. I refer to the work and writings of William L. Clark and George E. Pfahler, and it is my plea that their terminology be used. Recently, in a personal letter from Howard A. Kelly, who occupies an enviable international reputation as a surgical authority, he has this to say in favor of electrothermic coagulation in the treatment of accessible malignant disease: "I call it the new surgery; it is the biggest thing that has come into the surgical realm for many a year. We are using it every day and it is invaluable in some cases, either where radium fails or where the use of radium has so far altered the tissues that it is impossible to go ahead with it. One beauty of this form of treatment is that it can be so sharply and definitely localized, can be used repeatedly in the same area, and that the wounds consequently are generally not at all painful and healing is so beautiful."

Electrothermic coagulation is the localized production of heat in the tissue, from within, caused by the rapid oscillations of a high frequency current and applied to the tissues by means of a pointed electrode. As compared with excision, it has the enormous advantage, in accessible cases, of *destroying the malignancy before it is removed*. It is impossible to overestimate the value of this fact, that with coagulation the growth is removed as a mass of dead tissue instead of a mass of viable cells. This, plus the fact that the lymphatics and blood-vessels supplying and draining the affected area are closed, tends to remove the possibility of mechanical metastasis. As compared with all other methods of cauterization by heat, the active electrode is cold at all times. Heat develops in the tissues treated because of their resistance to the flow of the current. Therefore, it is progressively more penetrating the larger the amount of current used and the longer it is applied. The actual cautery, as we all know, rapidly heats the tissues to which it is applied to a very high temperature, the tissues being

charred if the heat is applied long enough. However, the actual cautery does not produce sufficient heat deep down in the tissues and, therefore, the results in treatment of accessible malignant lesions by means of the actual cautery fail to compare with those obtained by means of electrothermic coagulation.

LOUDIN OR MONOPOLAR TECHNIC

This is a surgical operation and, like most surgical operations, to be most successful should be completed at one sitting. It is painful, and since there is danger of producing mechanical metastasis by injections of local anesthetics, it is the custom in my clinic to induce general anesthesia by gas-oxygen.

For the smaller lesions, the Oudin or monopolar current is used, the pointed electrode or applicator being held close to the tissue so that sparking occurs; the lesion is completely encircled with a necrotic, dried out, or desiccated wall of proper depth, caused by discharge of the sparks into the tissues. This desiccated wall must be placed in the healthy tissues at some distance from the actual lesion, and it is the most important part of the treatment, because, if properly done, metastasis will be prevented; if not properly done, metastasis is almost sure to follow and failure to save the patient's life may result. Then, the lesion itself is completely desiccated by sparking as already described. If necessary, the needle may be run into the lesion to produce deeper desiccation. The desiccated tissues are next removed with a curet and if all of the unhealthy tissues have not been desiccated, further desiccation, not at some future time, but then and there at the first sitting, is demanded. If desired, the operation can be completed by a dressing of collodion and cotton. This entire procedure has come to be known everywhere as the desiccation method of William L. Clark, of Philadelphia.

ELECTROTHERMIC COAGULATION

For the larger lesions and those involving the tissues deeply, the d'Arsonval or bipolar current is used. With this current deep heat in sufficient quantities to destroy any tissue of the body, including bone, can be obtained. Therefore, in its use near bony structures

care must be exercised to avoid their damage. Likewise, if the bones of a part be diseased, no method can exceed it for efficiency in the destruction and removal of the affected bone. A large pad or metal electrode is connected with one pole of the machine, the electrode being placed usually under the buttocks of the patient. This electrode must be well wetted, preferably with saline, else the patient's skin may be burned at this point. To the other pole of the machine the active electrode is attached. The point is then held in contact with the tissue to be destroyed and the current is turned on, generally by means of a foot switch. Coagulation at one point is completed when the tissues are a dead white, or coagulated, and the current is switched off just before sparking begins. As stated above, the coagulation begins well out in the healthy tissues, the diseased area being walled off from the healthy tissues by a coagulation wall, and finally by painstaking care the carcinoma itself is destroyed and removed. *All of the disease must be destroyed and removed at the one sitting, otherwise the patient's chances for ultimate recovery are jeopardized.* A suitable dressing completes the operation.

IRRADIATION THERAPY

Radiation therapy is always indicated whenever and wherever a malignant process is found. If the disease is localized and accessible, the treatment had probably better begin with thorough irradiation. This reduces the resistance of malignant cells, decreases the circulation through the irradiated parts, and closes the lymphatics, thereby tending to prevent mechanical metastasis taking place during the indicated operation. In this paper operations are taken to mean any surgical procedure which removes the disease, electrothermic methods, and the insertion of radium. Postoperative radiation is sometimes indicated but is not nearly so important as the preoperative treatment because after operation there is no telling in what parts of the body malignant cells may be found, whereas before operation one can be reasonably sure of the location of all of the diseased cells. In cases that are not localized or accessible the only hope lies in intelligent irradiation.

Radium is the agent of choice where an intense local irradiation is desired. To be most beneficial it must be brought in direct contact with the tissues to be irradiated or, better, it should be buried into these tissues when possible. Either by burying the radium in several areas, or by filtration, the radiation should be as nearly homogenous throughout the entire growth as can be obtained.

Roentgen rays are indicated for irradiation of large regions, such as lymphatic drainage fields about malignant processes. Also, they are the agent of choice when areas containing healthy tissues or organs must be traversed by the rays before reaching the parts to be

It is undoubtedly a fine method of treatment when the disease is an incipient stage, but most of the cases that come to the radiologist are well past this stage and under this condition the massive dose method at one sitting often does more harm than good. The outcome of all this experience has been another method called the "saturation method" which I have used during the past 7 years. It provides for the use of all that appeared to be good in the massive dose method, that is the high voltage Roentgen rays, applied in small dosage at short, irregular intervals, arriving at a 100% saturation point within a few days



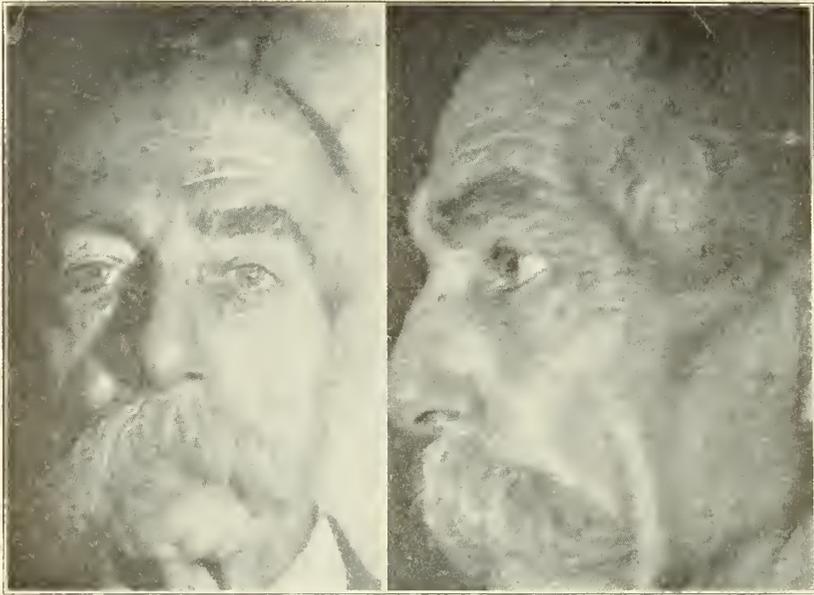
No. 1.—Before treatment.

No. 2.—Before treatment.

treated. Generally, however, the Roentgen rays and radium can be combined to produce maximum effect.

The methods of applying irradiation in the treatment of malignant disease are important. Your essayist remembers the first, the fractional method, which he like other radiologists applied years ago with sometimes failure and sometimes success. Then came the days of massive high voltage technic. This method of radical irradiation produced also some good and some very bad results. It appeared best for very early cases of malignancy, the class of case the radiologists seldom see.

after treatment is instituted, and then by subsequent irradiation to keep up the saturation point for several weeks. The one drawback to this method of treatment is, of course, its expense. However, for the radiotherapist who gets real pleasure out of his daily work and who has learned that no sacrifice is too great to achieve a worth while result, a way can generally be found. It was gratifying indeed to find during the past year, when reviewing the recent work of some 33 foreign and domestic clinics, that each used almost exclusively the plan of treatment outlined above. Pfahler presented the first paper on the satu-



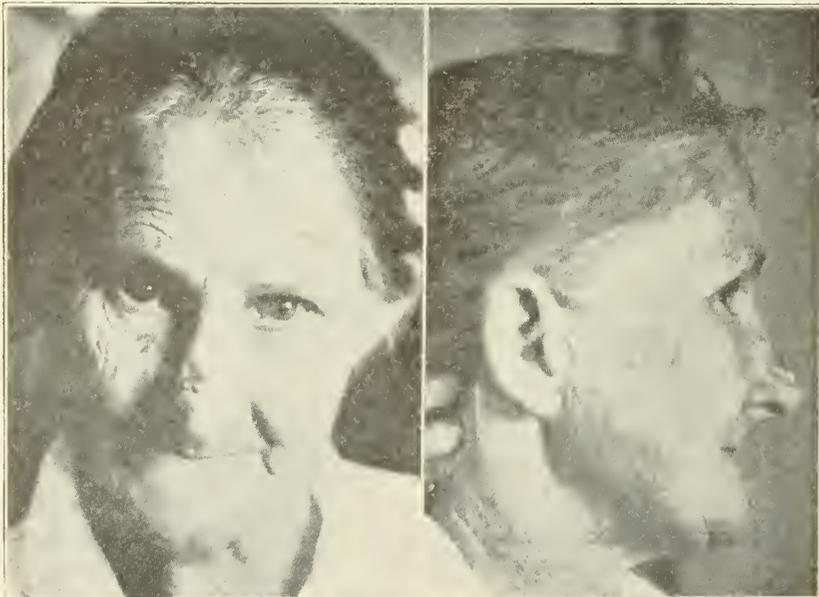
No. 3.—After treatment.

ration method last year at the International Congress of Radiology, held in London.

CARCINOMA OF THE SKIN

Most carcinomas of the skin of the nose, eyelids and face, occurring above the upper lip, are of the basal cell type, a comparatively benign form of the disease. However, in my experience, patients who have had acid treatments, currettings, cutting away operations,

etc., so frequently have local recurrences that some other form of treatment appears to be indicated in most of these cases. Electrothermic methods and radiation therapy appear to meet the indications perfectly. By these methods the disease is removed, a fine, soft, elastic scar results, and recurrence is the exception. If treated by these methods while only the skin is involved, 100% of recoveries should be obtained.



No. 4.—Before treatment.

No. 5.—Before treatment.



No. 6.—After treatment.



No. 7.—After treatment.

CARCINOMA OF THE LIP

Squamous cell carcinomas are prone to occur at points where skin and mucous membrane meet and this is the type that is found about the lip, most frequently on the lower lip; in the past 12 years, in my clinic, only 1 carcinoma of the upper lip has appeared. These are very malignant and produce metas-

tasis and death. If all fissures, cracks, ulcers, warts and wart-like lesions are thoroughly destroyed and removed by electrothermic methods, carcinoma of the lip can usually be prevented. Once the disease is established, very thorough treatment is indicated. This should consist of Roentgen ray treatment of the submental and cervical lymphatics and the lip.



No. 8.—Before treatment.



No. 9.—After treatment.

These pictures show the only carcinoma of the upper lip treated here during past 12 years. Seventy some cases of lower lip have been treated.

The disease is destroyed and removed by electrothermic methods and radium is buried deeply into the coagulated bases. If treated before metastasis has taken place, about 90% of the cases recover; after metastasis the treatment is seldom followed by more than palliation. Syphilis has appeared frequently in my clinic associated with carcinoma of the lip, and this combination of diseases is generally followed by failure even under the best of combined measures.

EAR MALIGNANCIES

If epithelioma of the skin of the auricle is treated thoroughly and skillfully by electrothermic methods and radiation, recovery is almost certain. If the cartilage is involved, none but the most skillful and thorough treatment can effect success. In this stage of the disease it is undoubtedly best to remove the entire auricle by electrothermic methods and to thoroughly irradiate the ear and the cervical lymphatics. When the bone is involved, or cervical metastasis has taken place, permanent recovery is the exception, the best of treatment being seldom followed by more than palliation.

Primary malignancies of the middle ear are very rare. At the Basle clinic, out of 45,000

ear cases only 6 had primary malignancy of the middle ear. Not one case has been treated by your essayist. However, these cases being of the squamous cell or squamous cell adenocarcinoma type very thorough treatment is indicated. In most cases probably the diseased bones had better be destroyed and removed by electrothermic methods and radium packed into the wound against the coagulated base. Roentgen rays are indicated for irradiation of the site of the disease and the lymphatics draining the region.

MALIGNANCIES OF THE EYEBALL

Carcinoma, sarcoma and glioma are found upon or within the eyeball. If small and accessible there is probably no better method of treatment than to remove the lesion by the electrothermic methods, the operation being preceded and followed by either Roentgen ray or radium therapy. These growths should give nearly as good results as malignant lesions of the skin. Great skill is needed here and it is possible to remove these lesions and leave very little scar, sometimes with no impairment of the function of the eye.

The larger malignant lesions of the eyeball, including recurrences, frequently demand that the eye be sacrificed. In these cases, the treat-



No. 9.—Before treatment

No. 10.—After treatment



No. 11.—Before treatment



No. 12.—After treatment

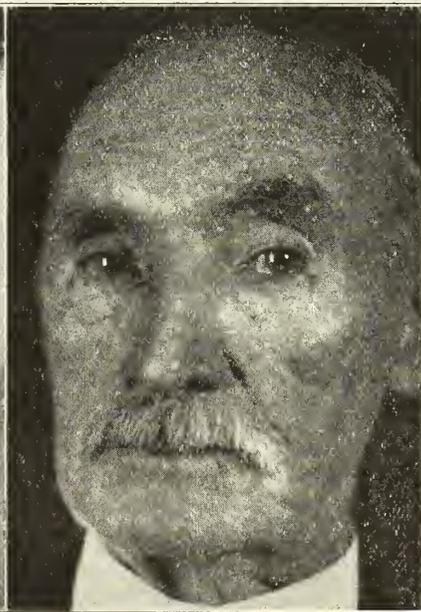
ment should always begin and end with thorough Roentgen irradiation. Following preliminary irradiation, the eye can be removed by electrothermic methods and radium element be packed into the wound. Then, repeated treatments should be given with Roentgen rays in order to give maximum protection against recurrence. (Figs. 10-13)

RETROBULBAR SARCOMAS

The operative and irradiation treatment of retrobulbar sarcoma together with the irradiation of recurrent growth, give such poor results that this method of treatment is not to be advised. On the other hand, radiation therapy has been successful in a few cases of this disease and is, therefore, the method of



Before treatment



No. 13

After treatment

This type of skin cancer has given practically 100 per cent. recoveries for five years and longer

choice among those who have had considerable experience with all methods of treating this malady. L. Webster Fox, for instance, today would probably not advise any other method of treatment than correctly applied Roentgen or radium rays. If used early in



No. 14
Superficial sarcoma of sclera and cornea before treatment.

the course of the disease, results can be obtained without injury to the normal tissues. The irradiation method of treatment is, of course, open to criticism because no microscopic study of the diseased tissues can be made and the diagnosis is therefore often not proved. (Figs 14 and 15).



No. 15
Retrolbulbar sarcoma after treatment by radiation therapy.

MALIGNANCIES OF THE MOUTH

Malignancies of the mouth, including those of the inner surfaces of the cheeks, the tongue, tonsils, floor of the mouth and gums, are frequently associated with syphilis; therefore, even in the absence of any history of venereal infection a Wassermann test should always be taken even though the lesion present

has already been proved to be malignant. Likewise, when definite improvement does not follow 3 weeks of antisyphilitic treatment any buccal lesion should be investigated and ought to be looked upon as malignant until its status is definitely proved.

Malignancies of the mouth are of the squamous cell type, that is the type of growth whose abnormal cells are of great resistance to irradiation. The rule is metastasis and death if neglected. The indicated treatment consists of thorough Roentgen irradiation of the site of the growth and of all of the regional lymphatics draining it. The growth is destroyed and removed by electrothermic methods and radium needles are buried deeply into the coagulated base. Later, Roentgen ray treatments are again instituted.

When the tongue and tonsils are involved, before operation by electrothermic methods is attempted the lingual or external carotid arteries must be ligated; otherwise, fatal hemorrhage may appear at the time the slough separates—in from 10 to 14 days.

At this time I wish to report a rare case, the only one of its kind that I have ever seen or heard of; a lymphosarcoma of the tongue.

Mr. L. A., referred to me April 8, 1927, by Drs. James W. Atkinson and T. Vincent Connolly. Age 37. A day laborer. Difficulty was first noticed in the summer of 1926 when patient had a very sore throat. Since this attack throat has remained sensitive and 4 months ago developed a sensation of fullness and of something growing at the base of the tongue. For the past 3 weeks talking and swallowing has been most difficult. Examination showed a mass the size of a butternut at left base of tongue. Dr. Gay B. Kim, pathologist, reported with some doubt that the growth was lymphosarcoma.

Ordinarily, lymphosarcoma gives beautiful results with correctly applied Roentgen or radium rays. Therefore, Roentgen ray treatment was instituted and the site of the disease and all of the cervical and submental lymphatics were thoroughly irradiated. Plans were made for the ligation of the external carotid artery and destruction and removal of the tumor and part of the tongue by electro-

thermic methods and the insertion of radium needles. April 22, 1927, patient appeared for observation and operation. Examination showed the mass nearly gone. This was typical of lymphosarcoma as the mass had nearly disappeared in 2 weeks from the date of first series of treatments. Roentgen ray treatment was therefore repeated on May 13 and June 3, 1927, at which latter time there was no visible evidence of the disease. July 23 patient was discharged. He was in for inspection again September 10, 1927, and thus far there is no sign or symptom of recurrence.

that is the floor of the antrum; or the cheek over the diseased side can be turned back and entrance to the antrum gained through its anterior wall. The latter is the route I like best but, quite naturally, the patient generally prefers the other because no damage is done to the face and deformity of the roof of the mouth can be nicely repaired by a dentist. Following removal of the disease, radium is packed into the sinus and treatment is completed by several postoperative Roentgen ray courses.



No. 16.—Carcinoma of the tongue before and after treatment

MALIGNANCIES OF THE ANTRUM

Sarcoma and carcinoma of the antrum have been observed in my practice. Treatment of these diseases always begins with thorough irradiation of the antrum and all of the draining lymphatics with Roentgen rays. Two weeks later this is repeated. In a few cases the disease has been practically eradicated by such treatment; sarcoma generally giving the most striking results. If signs of definite improvement are not noted soon after treatment, destruction and removal of the diseased tissues is indicated. For this operation there are 2 routes: through the roof of the mouth,

CARCINOMA OF THE LARYNX

If the disease is localized to a small enough portion of the larynx to permit of complete removal, electrothermic methods following preliminary irradiation would appear to be one of our best methods of management. This is probably best done by laryngofissure, because one skilled in electrothermic methods might not be equally skilled in the manipulation of the laryngoscope. Whichever route is used the work must be completed by several postoperative courses by radiation therapy. This is the plan of treatment that I would probably advise if one of my family had this

disease in an early stage. However, most of the cases that have come to my hand have been in a hopeless and inoperable stage. In these, Roentgen rays by the saturation method have been used. Some received slight relief, others were markedly relieved, but in the end, all died of the disease.

Prof. Regnaud of the Curie-Institute, Paris, has had considerable experience in the Roentgen ray treatment of early carcinoma of the

would appear that electrothermic methods and irradiation therapy are of value to men interested in the treatment of malignant disease of the eye, ear, nose and throat.

NUTRITION OF THE ADOLESCENT CHILD

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The adolescent period is not easily defined or limited. Roughly, it is from the onset of puberty to the development of complete physical and mental maturity. These processes, although concurrent, are not always definitely equalized in the progress. Full mental maturity for the individual is something hard to determine and evaluate, and undoubtedly the occurrence of complete sexual and physical maturity, with retardation of the accompanying mental development, is a source of considerable maladjustment and social distress.

The onset of puberty is quite variable in its time relationships in different races, and even in the same race under varying social and economic conditions. The age of onset is more easily established in girls than in boys, on account of the definiteness of appearance of menstruation, but while the changes in boys are not so apparent they are undoubtedly as radical. Onset of menstruation in girls is not strictly the beginning of puberty but is a landmark from which we can reckon both forward and backward. The changes of which this is a manifestation have been progressing and establishment of menstruation is an indication of the completion of one stage of that process. From the racial point of view, puberty occurs later in the Northern races and earlier in the Southern. Jewish children generally develop early and are in the Southern group. Italians and Greeks are the most early developed with whom we come in contact in this country. The South Germans are early, while the North Germans are late. Among the Scandinavians



Malignancies of the antrum after treatment by electrothermic method and radiation therapy. Deformity was corrected by a dental plate.

larynx and reports 12 cases; 8 are clinically well from 1 to 3 years after treatment; 4 resisted treatment; 2 with necrosis of the larynx; 1 was operated on, and 1 died.

CONCLUSIONS

(1) The electrothermic operative technic is described at some length, and the various methods of applying radiation therapy are mentioned. The principle involved in application of the saturation method of radiation is stated.

(2) Malignancies of the face, including those of the eyelids, auricle, and lip; together with those of the buccal cavity, eyeball, antrum and larynx are mentioned and a plan for their treatment by means of electrothermic methods, radium, and the Roentgen rays is briefly stated.

(3) From the discussions included it

it is not unusual to find menstruation beginning only at about 18 years of age.

Varying social conditions also have an influence. In the same race the children from the better class homes, leading a more sheltered and less active life, develop more slowly than those from larger and poorer families. Poor economic conditions continued over a long period also seem to retard the age at which puberty arrives.

The nutrition of the adolescent child is influenced not only by the physical changes taking place but even in as great a measure by the surrounding economic and social conditions. As a matter of fact, the body ordinarily very readily adapts itself to Nature's calls upon its metabolism but does not so easily adapt itself to the calls of our social system. The activities with which we load our adolescent children are truly enormous and although we have learned that excessive labor in grown-ups is poor economy, this truth is apparently forgotten in relation to children. Our school day, which ordinarily begins about 8.30 a. m. and continues to 3 p. m., is in itself sufficient for these children, but to that we add home work, dancing and singing lessons, foreign language training, house work and exercise of the social arts, which at the present time apparently includes late parties, petting and a hip flask. Control of these children has passed completely from the hands of the parents, and even those of the educators, into those of the wildest and most aggressive of these youngsters. The malnutrition which we most commonly see in our public schools is, in a great majority of cases, directly attributable to the strain of life these youngsters lead and to the lack of proper control over them.

There are certain physical defects directly related to the stage of development we commonly regard as adolescence. The increased activity which we now regard as due to endocrine changes very often exceeds that of normal healthy development. Growth is at this period somewhat disproportionate to the increase in weight, and this is especially noticeable in children who were previously under height. The weight increase under normal

conditions soon regains an equilibrium and, unless other things intervene, with no damage to the child.

The nervous system, both sympathetic and central, requires most consideration. Excessive irritability, mental and organic, manifests itself. "Pickiness" in matters of food is one of the manifestations of an increased tension. Hysteria and fainting spells are not uncommon. This increased nervous tension also has its effect in the constant demand for amusement and change. Specific glandular disturbances occur, regarding most of which we have no definite knowledge. Irregular menstruation, marked disturbances accompanying it, excessive and scanty menstruation with severe migraine are not uncommon. Of the similar changes in boys, which undoubtedly occur, we know nothing. Very rapid growth we may suspect to be of pituitary origin; a gland that has been shown to be closely related to the ovaries and testes.

Naturally, the gland that gets the most attention and frequently the most blame for things of which it is totally innocent, is the thyroid. Its very visibility, and especially the ease with which changes in its size during childhood are noted, exposes it to attack. A few definite things are known. The thyroid undoubtedly has a very definite rôle in the establishment of sex maturity. Athyroidic tadpoles do not develop into frogs and subthyroid children mature very slowly. But we must not forget 2 things: first, that visible gland enlargement does not mean increased function activity per se; and secondly, that normal gland changes should not be described as the cause of abnormal conditions elsewhere in the body. There is a normal enlargement and increase in function in the thyroid at puberty. Also there is a normal periodic enlargement of the gland at menstruation throughout the active sex life of the woman. Simple enlargement of the thyroid without other symptoms of hyperthyroidism can usually be ignored. Of the other glands of internal secretion very little is definitely known.

The rôle of focal infection in relation to underweight is so striking and the care of

these defects is so important a part of our work that the influence of the adolescent state upon them should be considered. There is no doubt that the increased metabolic activity of the body at this period, the instability of the general nervous and cardiovascular systems, tend toward a spreading of the local infection and the greater destructiveness of toxins liberated. The reason for this is that the active and reproducing cell is not as resistant to deleterious action as the more or less quiescent one. Acute rheumatic fever, with its cardiac sequels, is more common at this period than at any other time of life. Therefore, attention to and treatment of focal infection is at this time of the utmost importance. We have one caution to give; do not submit a child about to menstruate, or before the periodicity of the menstruation has been established, to any surgical operation save in an emergency. Not only for physical, but also for mental reasons, the reactions of fright and of surgical shock are to be avoided at this period.

The question of sexual development of

these children is a very vexing one. However, a sensible attitude toward it is sometimes a help. The presence of some of the abnormal sexual manifestations is the bane of existence of the public health worker and control or eradication is one of their hardest problems. Masturbation, the most common and most warred against, is probably of very little real importance. A recent survey of the sex life of educated women revealed what to most of us was an unheard of condition regarding masturbation. In boys it is every bit as common as reported among girls. Beyond its drain on the physical condition when practiced excessively in a child that is under par, it probably does little harm. Other forms of sexual irregularities are comparatively rare.

Overweight in the adolescent period is a distinct problem, as most of these conditions are of endocrine origin and of so diverse a type as to be practically out of the field of school workers; they should only be treated as individuals by their family physicians. The dietary factor is here, in almost all instances, of very slight importance.

IMMORTALITY

WILL SPENCER MCGANN

There is no death. The winds of yesterday
Have fled to stir the grasses otherwhere.
Nothing shall die. The rose that bloomed last
May
Will wake next spring as sweet, as subtly
fair.

The ripened seed that left its withered pod
But fell to earth to sleep beneath the snows;
It was not dead; nay, in the plan of God
It will revive again when summer glows.

Nothing shall die. What though the darkness
falls
Across dim eyes that gaze their last on
light!
Look up, oh Heart, to where the splendid halls
Of God's great palace shine beyond the
night.

There is no death. The flower may droop
and fade,
The ripe seed fall, the wind be hushed to
sleep;
The night will pass, and gloriously arrayed,
The Day Star burn above the eastern steep.
—*The Churchman (New York)*.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if:

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

DEFENSE AND INDEMNITY INSURANCE

Attention is directed to a letter from the Recording Secretary published under the head of "Communications" in this number of the Journal. You will remember that some disturbance was caused last year, and some fear aroused in the minds of insured members, by a newspaper article emanating from an attorney-at-law and criticizing a clause in group insurance contracts similar to ours. We did not believe the criticism well founded; it seemed rather specious argument on the part of a lawyer who was losing his case. However, the United States Fidelity and Guaranty Company, with whom our state society contract is placed, has done the very gracious act of removing this possible cause for legal dispute. As you will observe, they have eliminated from the policy that entire section, and have thereby made our master policy even stronger and more desirable than ever.

Considering the frequency with which malpractice suits are filed against physicians, and especially against surgeons, and the not infrequent assessment of damages by juries more influenced by sympathy than by justice, it is incumbent upon every practitioner to protect himself against unjust and unreasonable at-

tacks. We are not so confident today as we were in more youthful days that "truth is mighty and will prevail", or that one can wrap himself in his mantle of good intentions and honest service and rely upon the courts to render absolute justice; we have received too many hard knocks and seen so many court errors that we prefer to back self reliance with a substantial insurance policy.

The Group Defense and Indemnity Insurance policy offered to members of the Medical Society of New Jersey is the safest and strongest protection of this kind ever devised. Incidentally, it is the cheapest. If you have not already registered for such protection, better do so at once.

MEDICAL SOCIAL EVENTS

During January two very delightful social gatherings were held by the physicians of this state; the Testimonial Dinner to the Recording Secretary of the Medical Society of New Jersey, Dr. John Bennett Morrison, and the Seventy-fifth Anniversary of the Camden City Medical Society. Diamond Jubilees occur but seldom in the life record of any society but quarter centenaries or decennials might also justly be celebrated, for every occasion of the

kind tends to develop good-fellowship and to influence the ethical and scientific conduct of the younger members. Such recognition of service rendered as was exemplified in the Morrison dinner certainly should be encouraged. All too rarely do we present our comrades with flowers while the olfactory sense is still active. It might be well to remember that a field daisy handed to the living will produce a better effect than a wealth of American beauties placed on the grave.

Let us have more of these festive occasions. Particularly let us take cognizance of those members who have grown gray in the service. We recall the very enjoyable dinners tendered Dr. Edward J. Ill and Gordon K. Dickinson, each upon the completion of 50 years active practice. Are there not others among us deserving of such honor? Permit no such opportunity to pass unheeded, for in honoring our leaders we honor ourselves.

IS PERIODIC HEALTH EXAMINATION A FAILURE?

Perhaps it will be wise to present our own answer to this question before submitting any arguments, lest some one should jump to the conclusion that we have fallen into doubt about the matter. Our answer is, of course, "no"—most positively, no. The reason for even considering the question is found in the fact that a severe arraignment of periodic health examinations has recently been made by a member of the profession and is likely to be widely circulated among the laity. The author of the article writes jokingly of many things and may not have intended his remarks to be taken too seriously. We have great sympathy with a joker, but joking about matters of health and life must be done very carefully, especially if the joke is to appear in print. There is always more danger in the printed than the spoken word, and greater caution must be exercised in writing to than in speaking before an audience, lest the joke be accepted as a literal fact.

The criticism made was that the periodic health examination is doing more harm than good; that if a person believing himself to be in good health comes to you and learns for the first time that he has some kidney change, a slight heart defect, a beginning arteriosclerosis with hypertension, you have in effect read his death sentence, undermined his morale and taken away from him a score or more of productive years through which he might have worked along in blissful ignorance.

As "Notes and Abstracts" said concerning such logic, "this would elevate ignorance and humble knowledge, set a premium on chicanery and penalize truth, patronize quackery and discourage honest medicine. By the same principle, inspection of boilers, engines and all machinery should be discontinued, and all forms of insurance scrapped."

The fallacy of such argument is sufficiently patent to every physician, but it may not be recognized by some of the unthinking portion of the laity and it may tend with them to undo good work we had hoped was accomplished. The only present hope for cancer patients rests upon early diagnosis, and periodic examination is the only promising scheme, applicable to large numbers of people, for detection of this disease in its incipency. Even instances such as the criticized, the evil effect would not have been due to the examination but to weakness of character on the part of the person examined. Lack of stamina to face the truth about himself can hardly be charged against the examination.

So far as the medical profession is concerned, the only point where we fear any degree of failure attributable to the health examination plan is where the too busy physician attempts this work and, in his haste, performs it imperfectly. The same periodical—Notes and Abstracts—from which we quoted above, said of this aspect of the question:

"Is the medical profession, by and large, sufficiently adjusted in its own attitude toward the periodic health examination? The aver-

age practitioner has been trained to discover sickness, but is he adapting himself to make the health examination?

Is he keeping up with the advances in psychiatry so that he may correctly evaluate the psyche of his patient and know how to control his mental and emotional factors? Incidentally, is not the 'success' of the charlatan largely due to non-neglect of this human side of the case?

If a patient presents himself today for a complete physical overhauling and next month dies of rectal carcinoma, no proctoscopic examination having been made, where lies the responsibility?"

Here is a problem affecting success or failure worthy of considerable thought.

OBLIGATION OF THE OFFICE HOLDER

It goes without saying that every officer of every medical society should take his election as a compliment and his official duties as a matter of serious concern. If not prepared to accept the obligations attendant upon a given office, he should decline the honor appertaining to the position. The Michigan State Medical Journal recently published some pertinent remarks upon this subject, which if taken to heart by all officials would materially benefit the organized profession:

"We concede that any member elected to office is accorded honor by his fellow members and is justly entitled to entertain a degree of pride by reason thereof. However, it is not an idle honor. Certain definite responsibilities are implied and assumed when the officer is induced into office. Unless he is in earnest and determined to acquit himself of those responsibilities he should not accept office. There is no place in organized medicine for office holding members who are content to idly rest upon their laurels. County Societies will not progress or achieve when headed by officers who simply exemplify themselves as mere figure heads.

"The president and secretary are the leaders and directors of organized work. To lead, to direct, entails thought and work, not for the few hours while a meeting is being held but every day of the society year. Officers should plan, think, eat and sleep with their organizational plans and problems continuously. In no other way can accomplishments be recorded. Officers should formulate definite plans as to their year of work and then obtaining the aid of committees and members they should expend every effort to carry out the adopted plans in fullest degree. Thus and thus only will you justify the honor that your members have conferred upon you."

PENDING LEGISLATION

Up to the moment, few bills having any medical bearing have been introduced at the General Assembly. It is anticipated, and even rumored, that the usual collection of assorted antimetrical propositions will be forthcoming, and, as they appear, the Welfare Committee will give them attention and the Journal will endeavor to keep members informed concerning action taken or necessary to be taken.

One very radical measure already presented—Senate 34—by Senator Simpson deserves the immediate attention of every member of the Society and everyone should hold himself in readiness to respond to a call for help in the event that a showing at Trenton is found to be necessary. This measure provides for a fairly complete reorganization of the state government, materially changing the form and procedure of some departments and obliterating some bureaus and commissions. It proposes to dispense with the Board of Medical Examiners and to put enforcement of the Medical Practice Act in the hands of a bureau whose membership is selected, apparently, without any consideration of ability to pass upon a candidate's fitness to practice the healing art.

Without waiting for the above mentioned emergency call, use any influence you may have to prevent passage of Senate Bill 34.

Testimonial Banquet

Tendered to

JOHN BENNETT MORRISON, M.D.

In appreciation of his unselfish service to the Medical Society of New Jersey.

On the evening of Saturday, January 21, 1928, members of the State Medical Society, and a small number of guests invited from outside this membership, gathered at the Waldorf-Astoria Hotel, New York City, to do honor unto the Society's Recording Secretary, J. B. Morrison, whose devoted labors during the past 4 years have so strikingly revived the old organization. The idea of publicly acknowledging this service and of paying reverence to the servant, originated with President Conaway, but credit for the very efficient and highly successful manner in which the idea was carried to a magnificent realization belongs chiefly to Ex-President Lucius F. Donohoe. The attendance was larger than had been expected—a tribute in itself; the enthusiasm was intense; and we

have not witnessed any more enjoyable public medical affair in this state.

The Committee of Arrangements consisted of: Lucius F. Donohoe, chairman Joseph V. Bergen, Lawrence H. Bloom, William W. Brooke, Richard M. A. Davis, Archibald C. Forman, Edward Guion, John F. Hagerty, F. R. Haussling, Benjamin Van D. Hedges, Edward J. Ill, W. H. James, Charles J. Larkey, A. Haines Lippincott, Joseph F. Londrigan, John C. McCoy, Joseph R. Morrow, John Nevin, Emanuel D. Newman, B. S. Pollak, Jacob Reiner, Daniel F. Remer, John N. Ryan, William G. Schauffler, Charles Schlichter, George H. Sexsmith, Maurice Shapiro, George N. J. Sommer, Ernst Thum, Francis Todd, George T. Tracy, Clarence W. Way, and Stanley R. Woodruff.

Among those present were:

Arlitz, W. J.
Ash, Frank
Barkhorn, Frank
Bohl, L. J.
Bennett, C. D.
Blackburne, G.
Bergin, J. V.
Botbyl, Bert W.
Bonynge, H. A.
Bell, J. F.
Becker, Leo
Brancato, Peter
Bloom, Lawrence
Bagg, Linus W.
Conaway, W. P.
Carrington, W. J.
Costello, W. F.
Curry, Marcus A.
Connolly
Cogan, Henry
Clay, Thomas
Costil, Henry B.
Cosgrove, S.
Collery, Wm.
Davis, R. M. A.
Dickinson, G. K.
Donohoe, L. F.
Dwyer, Wm. A.
Dingham, Norman
Dingham, Thomas
DeYow, Leon
Ely, Lancelot
Forman, A. C.
Finn, Fred
Frank, M.
Felt, Herman
Green, James S.
Gray, John W.
Guion, Edw.
Hunter, Jas. Jr.
Hedges, B. V. D.
Haussling, F. R.
Hawkes, E. Z.

Hagerty, John F.
Hagen, C. R.
Harvey, Thomas W.
Hutchinson, A. D.
Ill, Edw.
Ill, Charles
Jacob, Wm.
King, Geo. W.
Kim, Guy
Keller, Franklin
Kelly, Chas. B.
Londrigan, Jos.
Lathrope, Geo. H.
Lipshutz, B.
Liva, A.
Lucas, H. H.
Larkey, Chas. J.
Levine, S.
Low, Donald B.
Lippincott, A. Haines
Lee, Thomas B.
McGuire, J. J.
Molloy, J. A.
Morrison, F.
Murray, R. W.
Mills, Clifford
Meneve, A.
Miner, Donald
Murn, Charles
McBride, Andrew F.
Mulford, E. R.
McMahon, B. C.
McDonald, R.
Morrill, Jas. P.
MacAlister, W.
Mitchell, C. R.
Marsh, Elias
Morrow, J. R.
Newman, E. D.
North, H. A.
Nevin, John
Nye, Howard
O'Connor, J. J.

Olmstead, W. D.
Oram, Jos.
Perlberg, H. J.
Phelps, Jas.
Pollack, Berth
Quinn, Stephen T.
Reik, Henry O.
Roberson, S.
Remer, Daniel F.
Russell, Chas.
Ryan, John
Roemer, J.
Reiner, J.
Renner, D. S.
Somer, Geo. N. J.
Shapiro, M.
Sexsmith, Geo. H.
Sherman, E. S.
Slocum, H. B.
Schauffler, W. G.
Sandt, F. R.
Spence, Henry
Snedecor, T.
Sprague, E. W.
Schlichter, C.
Tracey, Geo. T.
Tyndall, H.
Thum, Ernest
Todd, Francis
Tuers, G. E.
Unlerwood, J. H.
Vreeland, Ralph
Wilson, Norton L.
Weiss, M. J.
Way, C. W.
Woodruff, S. R.
Williamson, W.
Wendel, A. V.
Willard, Harry S.
Wilkinson, B. E.
Wallhauser, H. J. F.
Walker, J.

On the menu card, prefacing and closing the announcements, were 2 quotations appropriate in application to the honored guest and selected with rare good taste.

The first, from the pen of Sir William Osler, read: "And the master word is *work*, a little one, but fraught with momentous sequences if you can but write it upon the tablets of your hearts, and bind it upon your foreheads."

The second, by George Eliot: "The most solid comfort one can fall back upon is the thought that the business of one's life is to help in some small way to reduce the sum of ignorance, degradation and misery on the face of this beautiful earth."

When the very substantial and delectable dinner had been disposed of, Dr. Donohoe addressed the diners felicitously on the occasion.

DR. DONOHOE'S REMARKS

When I was asked by our President, Dr. Walt P. Conaway, to assume the Chairmanship of the Dinner Committee to honor my friend, Dr. Morrison, I was very glad of the opportunity to do my share for one of the most unselfish workers in our state organization. I have had a very pleasant task. I enjoyed it very much and I wish to thank the members of the Dinner Committee for their cooperation and the members of our Society who have accepted invitations to attend. I know the Committee joins with me in wishing you all a good time.

I have known Dr. Morrison for many years, but to know his real ability one must be intimately associated with his work, as I was during my term of office as President of our Society. There was no road from Cape May to Hudson County too long for Dr. Morrison to travel when he decided to visit a County Society. I remember one morning starting with him at 6 o'clock to attend the Cape May County Meeting at 10.30. We spent a very pleasant day with the members and arrived home about midnight. This is only one example of the great work done by our conscientious Recording Secretary. If we have succeeded in obtaining a complete roster of our State Society and historic facts connected with our organization, we must all join in tribute to the guest of the evening for his persistence and labor in making the collection possible.

Morrison is one of the straight-shooting medical men, who believe more in helping others than in doing things for himself. The interest of our State Society is always foremost in his thoughts and always takes pre-

cedence over anything that he could possibly do to benefit himself.

In selecting a Toastmaster, I know of no one better fitted to continue our tribute to Dr. Morrison than our friend, a gentleman and a scholar, fair to everyone, representative of the highest type of the Medical profession of our State, Dr. James J. Hunter, Jr., of Westville, who will now assume charge of the festivities.

The Toastmaster: We have gathered here this evening in honor of Dr. John Bennett Morrison, the Secretary of the Medical Society of New Jersey. It was during my term as President of the State Society that Dr. Morrison became our secretary, and I well remember when we were going through our membership list in search of the right man for this place, that Dr. Emanuel Newman remarked to me—"I know the man that would fill the place perfectly but he is a very busy man and I do not know whether he could find the time to serve". My reply was that of a famous author, "If you want work well done, select a busy man—the other kind has no time." Dr. Morrison was selected, and his work and loyalty are well known to you all. Some writer has said that "An ounce of loyalty is worth a pound of cleverness", but we have been most fortunate in securing both loyalty and cleverness in the person of our secretary, and we are here this evening to give voice to our deep and abiding appreciation of his loyalty to the interests of the State Society.

"To love one's friends, to bathe in the sunshine of life, to preserve a right mental attitude—the receptive attitude, the attitude of gratitude—and to do one's work; these make the sum of an ideal life." Dr. Morrison has lived this "ideal life" in the fullest sense and as our secretary has given of his best at all times.

Before introducing the speakers of the evening, there is one thing more that I would like to do for you, one and all, and that is to express to our President, who originated the thought of this dinner, and to Dr. Donohoe and every member of his committee who have worked so hard to make it a success, the deep appreciation of every man present this evening. In doing this I feel that I am expressing the sentiment of all present. May I ask that we give to Dr. Conaway and Dr. Donohoe and his Committee a rising vote of appreciation and approval. (All standing and applauding.)

It would be presumption upon my part to attempt to introduce to you the first speaker on the program for he is too well known to need an introduction to any medical gathering. So, permit me merely to present to you

one of the flowers of the Medical Profession of the United States, Dr. James Joseph Walsh.

LAUGHTER AND HEALTH

James J. Walsh, M. D., New York City.

I am mighty glad to be present at this very interesting dinner to Dr. Morrison. I have been more interested in the history of medicine than in anything else and, therefore, I have come to know very thoroughly how much the life of medical societies and the work they do depends on their secretaries. I happen to have been asked to talk to the New Jersey State Medical Society on a number of occasions during the past 20 years or so and I have been particularly gratified to note the fine work it has been doing in recent years. An institution, and especially a successful one, is always the lengthened shadow of a man. I looked for the man producing the shadow and found that it was Dr. Morrison. Of course the Presidents of the Society have held up his hands in the good work until now your New Jersey Medical Society is one of the best in the country and doing effective work in many departments for the benefit of the medical profession in your state.

You are, I believe, the oldest medical society in the country. Sometimes, you know, when things get to be very old, they lose their pep and their energy, to a degree, but above all they lose their initiative, and the result is that they fail to accomplish as much as they ought to. Now this is not true of the New Jersey State Medical Society; but, on the contrary, in its ripe old age it is setting a magnificent example for the other state medical societies and for the organization of all the units in medicine.

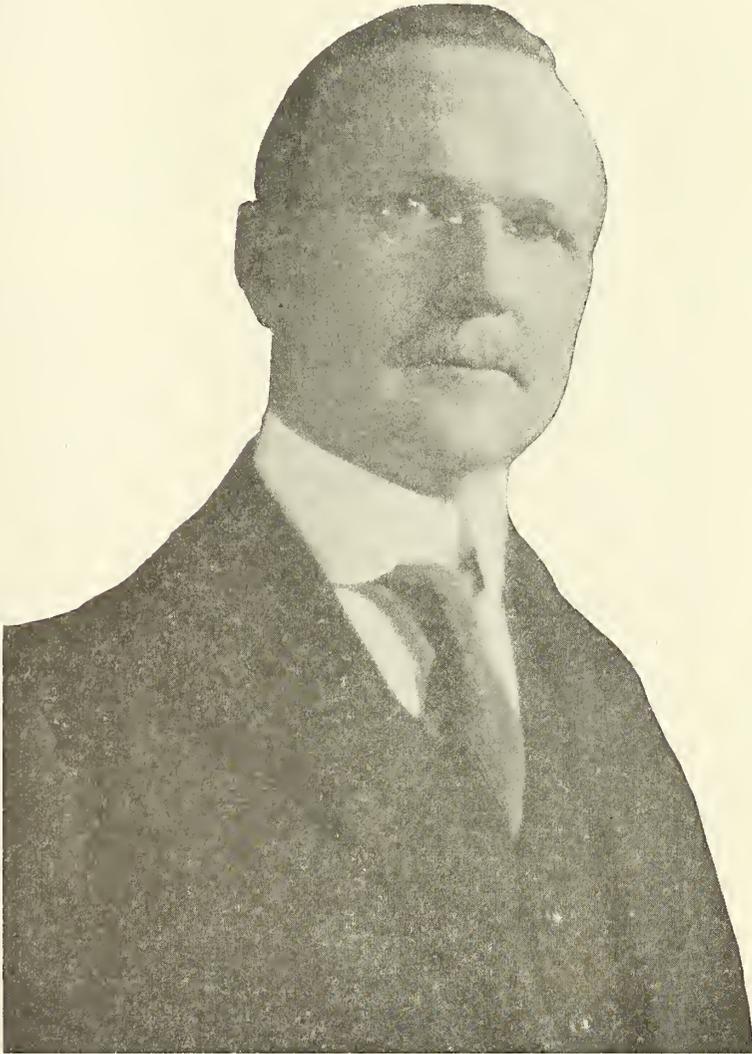
There is a story that is said to have been a favorite one of Washington's. He told it of an Irish soldier of the Pennsylvania line which had meant so much for him at the battles of Princeton and Trenton when the soul of New Jersey entered into his men and produced one of the most effective actions of the war. That week's campaign from Princeton to Trenton is one of the models of warfare for all time. After the winning of the second battle, this Irish soldier went in to get a drink, thinking that he deserved it. I need scarcely say that this was before the days of the Honorable Mr. Volstead, and what he took was straight stuff. It was poured out for him in a very curious antique-looking glass which, unfortunately, did not hold very much. The landlord said to him, "Do you know that that glass you hold in your hand is over 100 years old?" and the Irishman replied, "Well, it's the smallest thing of its age that I ever saw."

Unfortunately, they have traced that story back to Greece and from there I believe to Babylon and Egypt, showing that stories are about as old as they can be and that man's humor does not change very much, if at all, as time goes on. Someone once said that there are only 29 jokes altogether and that 17 of those are to be found in Athenus' Table Talks, published about a hundred years after Christ. They said to an Irish friend of mine that there were only 11 possible plots for plays, and he was taken back for a moment, but came back with this, "Nonsense, there are only 2 possible plots for romantic plays: in one of these you have 2 men and 1 woman, that is a tragedy; and in the other you have 2 women and 1 man, and that is a comedy; and that is all there is about it."

But to go back to that Washington joke. The Jersey State Medical Society is now well on its way to its two hundredth year and instead of being the smallest thing of its age it is one of the largest, and above all is one of the liveliest. The man who is more responsible for this than anyone else is Dr. Morrison and I am mighty glad that you are giving a dinner for him. Much better that he should hear your gratitude now than that you should send him a half dozen of hearsefuls of flowers when his hearing and vision are no longer working with their ordinary organs of clay. I am glad to share in your congratulations to him.

They said to me that besides my congratulations to Dr. Morrison, I should have to, as on all previous occasions, talk to the New Jersey State Medical Society about something serious. Now the most serious thing that I know is the relation of laughter to health. I have recently written a serious book about laughter called "Laughter and Health" and I am afraid that is what you will have to listen to this evening. Do not forget the seriousness of it. People are sometimes inclined not to take me too seriously but I am one of the most serious men in the world. You ask Dr. Donohoe, or some of the men who have known me the longest, about that and they will tell you. And, I am getting more and more serious as I get older.

A great deal has been written about the physiology of laughter and perhaps even more about the psychology of laughter but the surprise is that, considering the effects that laughter must produce upon practically all the large organs of the body, little has been written about laughter and health. Indeed, when in the spring time I was asked to write an article for the Festschrift number of Medical Life coming out in honor of Professor John Hemmeter, of Baltimore, on his seventieth birthday, I thought of writing on laughter and



DR. JOHN BENNETT MORRISON

A man who believes that the best preparation for tomorrow's work is to do as well as you can today.

health, but when I turned to the medical library at the Academy of Medicine I found there was nothing directly bearing on that subject. I then turned, as we all do under such circumstances to Colonel Garrison, of the Surgeon General's Library at Washington, and he told me that so far as he knew no book had ever been written on the subject. That seems to me a very surprising thing because laughter consists of a set of movements in the diaphragm, up and down, with explosive sounds uttered from time to time as the current of air from the lungs passes through the larynx and is shut off or partially interrupted as the result of laryngeal movements. You can try and see for yourself just what it is at any time. This is an experiment that you do not have to make any preparations in order to perform. Down goes your diaphragm and then you begin to breathe out and, if you feel like it, you interrupt it every moment or so by bringing your laryngeal cords together with the explosive sounds ha-ha-ha-ha; unless of course you are the sort of person who laughs with a hee-hee-hee-hee, though those of course are mainly women; and then if you happen to be rather old or inclined to be glum and you have to force yourself to laugh, the sound is something like huh-huh-huh-huh. (Demonstration). Up and down goes your diaphragm if the tendency to laughter is continued, and your abdominal muscles come into play, and then after a while your accessory muscles of respiration, and if you are laughing real heartily, every muscle of your body will share in it to some extent. I am sure that you have seen men lean over on the chair in front of them so as to support themselves, even though they were sitting down, because every muscle in their body was quivering from the effects of their laughter.

Now man is the only animal that laughs; and I need scarcely say here that man is an animal. There are some people who seem to think that it was the evolutionists who first hinted to us that man was an animal, but the philosophers for some 3000 years have been assuring us that man is an animal; not that he is descended from or related to the animals, but that he is an animal, a rational animal they say, and we are quite sure of course about his animal part but not so sure about his rationality. The number of men who really do any reasoning is mighty small. The same philosophers, however, proceeded to tell us that it was just as good a definition of man to say that he is a risible animal as that he is a rational animal. It takes some reasoning to enable one to laugh because you have to see the incongruities of things. As man is the only animal that laughs, it con-

stitutes a definition of him to say that he is a risible animal. There are some animals that make sounds resembling laughter, animals like the jackal and the hyena, but anyone who ever saw them when they were uttering the sounds called laughter would never think that they were laughing. They are usually pulling their prey to pieces about that time and exulting over it, but the guttural sounds that issue from their throats are anything but those that man utters when he is in the mood for laughter. We have a kind of laughter called canine or dog-like but that is the *risus sardonicus*, or sardonic laughter, which is noticed in connection with strychnin poisoning when the spasm of the face muscles cause a sardonic grin. By the way, it was called sardonic because there is a weed from Sardinia that produces this effect.

When you were making your experiment with laughter a minute ago did you notice how all the organs in the neighborhood of your belt, just above and below, were shoved up and down by it? In laughter the diaphragm moves up and down 3 or 4 inches in mild laughter, and 5 or 6, or more even, when the laughter is deep and hearty. Now note all the organs that are affected by that. First, there is the liver. That is the largest organ in the body and its greater curvature makes a dome for itself in the diaphragm. The liver is probably the most important digestive organ in the body. When you move it up and down this way of course you massage it and that causes an increased flow of blood to it and the agitation of it sets all the liver elements at work so that the liver gets a pretty thorough shaking up and stimulation to fulfill its functions. How many symptoms and complaints of various kinds are attributed to a sluggish liver. Well, laughter is the best thing in the world to keep it from being sluggish.

When they asked an Irish friend of mine in New York, whom I like to quote whenever I do not want to be responsible for a quotation myself, whether life was worth the living or not, he said, "that depends on the liver". Of course he meant both the person that does the living and then that big organ weighing 6 to 8 lb., according to the size of the man, in the right upper quadrant of the abdominal cavity, which is so important for life. If there is anything the matter with that, life will look brown and yellow and slate colored and all that sort of thing, everything but green in the Irishman's opinion, and you will have a dark brown taste in your mouth when you wake and life will not be worth the living. The old Greeks used to say that a man suffered from melancholia. Well, that

only means black bile. In the modern time we say that a man is bilious. Rather, we doctors do not say it but our patients say it for us. I once analyzed a dozen cases that came into the dispensary with the ready-made diagnosis of biliousness and I found that 11 of them had different things. Two of them had cancer of the liver but the other ten might be listed as miscellaneous. They had everything from neurotic indigestion up and down. That same Irish friend of mine said, "life is a dangerous thing at best and very few of us get out of it alive". The thing to do is to keep our livers in order, and what will do more for them than having the diaphragm rub them the right way? We all like to be rubbed the right way, and so does our liver.

But the liver is only one of the organs that is affected. Over on the other side is the spleen and that too is shoved up and down as the diaphragm goes through its excursions in laughter, and movements of the spleen are very important because it has a whole series of movements that it keeps by itself. These get sluggish without exercise and then there is anemia because one of the great blood making organs is not doing its work properly. Notice what has happened recently with regard to so-called pernicious anemia. We have been feeding a lot of these patients on liver, and occasionally on spleen, and they have been getting better though pernicious anemia is usually supposed to be a progressive and eventually fatal disease. Why couldn't we get a good deal of liver substance and probably also splenic extract floating round in the circulation as the result of massage of both the spleen and the liver?

But we are only beginning, as yet. Just below the diaphragm lies that soft, rather insubstantial organ, the pancreas. I believe the butcher calls it when he has it for sale the "sweetbreads"; of course he throws in certain other organs like the thyroid, and perhaps even the suprarenals, under this term. The general public does not know much about the pancreas but I need scarcely say to you that after the liver it is the most important digestive organ that we have. It is far more important to digestion than is the stomach. After all, as we have learned more about the stomach in recent years, we have come to realize that the stomach is very largely an enlarged end of the swallowing tube, which enables us to store up food and do our eating once every 5 or 6 hours instead of having to do it every hour or so during the day as some of the animals do. Their main occupation is eating. They live to eat but we are supposed to eat to live.

The up and down movement of the diaphragm impinging on an insubstantial organ like the pancreas must stimulate its activity a good deal. For instance, like all massage, it must increase its circulation. The pancreas has an external duct through which empty 3 or 4 important digestive ferments that perform excellent digestive service in the intestinal tract. The pancreas is next in importance to the liver as a digestive organ. It has been calculated that there are some 20 oz. of pancreatic fluid poured into the digestive tract, and this digests starches and meats and possibly even emulsifies fats, though we are inclined to think that that is mainly the liver function. Besides this, however, the pancreas has an internal secretion that gets into the blood stream. That arises in the islands of Langerhans, a series of groups of cells separated from those other cells which pour their secretion into the duct. What we really have here is two glands or two organs and not one. This second organ contained in the islands of Langerhans is extremely important. Its secretion enable us to use sugar properly in the body; without it we have diabetes; and if there is absolutely none of it we die. Extermination of the pancreas is fatal, and any serious disturbance of the pancreas is likely to be fatal. Probably the most important medical discovery of this twentieth century is that of "insulin" made by Banting and Ross at Toronto. Think of the effect that massage of the pancreas must have on this organ of the islands; *insula* in Latin means island, hence that word insulin. Probably there is nothing to help us better use up sugar in the body than the increase of circulation in the pancreas caused by laughter. We have known that for a long time though we have not known the exact process. One of the very old expressions in medicine is "laugh and grow fat".

And then above the diaphragm we have the heart and lungs. The heart is literally lifted up by laughter and then it drops back and we lift it up again and we must stimulate it to do its work a great deal better. Surgeons have found that massage of the heart will sometimes set a heart going again after it has stopped and when otherwise the patient would be dead in a few minutes. We need not be afraid of hurting our heart by laughter because the heart seems to have been so situated in order that the diaphragm might stimulate it. We can feel our heart move around, though perhaps not to the extent that is sometimes described. There is a story that 2 men were wounded at the battle of Antietam, and by one of those curious coincidences which sometimes occur, exactly in the same way. When the

stretcher bearers were gathering in the wounded, they found an Irishman lying on his face—he had evidently been just plunging forward—with a bullet wound directly over his heart and the place of exit directly behind, indicating apparently that the bullet had gone right through his heart. They turned him over and finding the location of the two wounds said, "There's no use taking him in", but just then Pat was coming to, after having been turned over, and he said that he was as good as three dead men yet, so they "brought him in". They found a colored man lying on his back and he had the same sort of wound. When they stirred him he came to and they took him in. In both of them, one of the old-fashioned bullets had struck the rib just over the heart a glancing blow and then ricocheted around the rib and passed out the back. Neither of them badly hurt, much more shocked than hurt, and 3 days later when Pat wanted to get up and get back to the ranks they asked him how it was that he had not been killed entirely since that bullet seemed to go right through his heart. "Oh", he said, "we were just charging and me heart was in me mouth." The colored man said that he was just retreating and his heart was in his boots. We may not get such dislocations of the heart as this but the diaphragmatic dislocation seems to do the heart good. Try it any time you want and see what a merry ha-ha will do to lift heart up physically and metaphorically.

And then the lungs. When you take an ordinary breath you draw in about 500 c.c. of air and nearly half of that is only in the trachea and the bronchi and doesn't get on to the bronchioles, and particularly the alveoli of the lungs, at all so that it isn't any good for breathing purposes. If you draw a medium sized breath with a little effort, you draw in over 2000 c.c. of air, but if you take a good deep breath it is between 4000 and 5000 c.c. Laughter is the easiest way to draw the deepest kind of breath. The air actually seems to go down to your toes and tingle out to the ends of your fingers. It is very probable that we take in 7 to 10 times as much air as in ordinary quiet breathing, when we laugh heartily. No wonder toes and fingers tingle because half a minute after you begin laughter, fresh superoxygenated blood, with lots of oxygen in it, goes wandering round through tissues that were rather sluggish before. Try it any time you see fit. Laugh and feel the effect of the oxygen as it goes running through your tissues.

And then there is the effect of the whole process on the mind. No wonder that there

is a feeling of uplift, for there is a lot more of oxygenated blood going to the brain. And then your ductless glands; the suprarenals are impinged upon by deep laughter, and the vibration produced in your throat by the merry ha-ha-ha massages the thyroid and the remnant of the thymus, because we are not persuaded but that there is something in that, and then the parathyroids, without which life is impossible, and then the carotid glands that lie along the carotid arteries. Put your hand on somebody's throat when he or she is laughing. Be careful about the *she* because a laughing woman is a dangerous thing; and particularly a laughing widow. A little widow is always a dangerous thing. It is a good deal worse than a little wisdom, though the old proverb is supposed to have been made with regard to wisdom.

Is it any wonder that I should insist, as I did in the article for the Hemmeter Festschrift, that laughter is an extremely important thing for health. There is no process in the body that I know that is more conducive to health than good hearty laughter.

I found the subject so interesting that after writing the article I settled down and wrote a book about it. Now I am not advertising that book, you understand, but Appleton has just published it and if you would like to see what it means why of course you can get it. I can't prevent you from doing that. Indeed I wouldn't even try to prevent you. It will cost you only \$1.50, we're not hogs. I have had one very curious experience with laughter. I found that it had a rather inexplicable paradoxical effect on blood pressure. It lowers blood pressure in people who have high blood pressure but it raises blood pressure in people who have low blood pressure. I don't mean merely those who have 125 or 130 but who have 105 to 115. I have tried it a number of times on these patients and it always works. Blood pressure is the very latest thing and we are all interested in it, but worry about blood pressure when it is high is probably the worst thing in the world. Laughter brings about relaxation of tissues that probably has a good deal to do with letting up on the tension that these people exert on themselves because they are in a panic about their blood pressure. I have seen a man who was going around perfectly happy with a blood pressure of 220, and sometimes higher, fall into the hands of a doctor who told him he had high blood pressure and that he might expect to die almost any minute; after that the pressure went higher and it was the hardest thing in the

world to bring it down, but once I got him to laugh it came down.

Try it sometimes and see. Try it on your constipated patients and see what an effect it has. Send them to a roaring musical comedy some night, or a good farce, instead of giving them the usual dose of heavy oil, and see what a difference it will make. Between the excursions of the diaphragm and the muscles of the abdomen which will get a little sore if they laugh hard enough, the intestines get massaged thoroughly, and there you are. Try it and see.

Such dinners as this make for laughter and health better than anything else that I know. The spirit of this one, and I use that word "spirit" in no invidious sense, has been just marvelous. I think that no one here will ever forget the occasion. You have gathered to honor a beloved colleague in the profession, a man who has spent himself for professional progress and advancement and the presence this evening of men from all over the state of New Jersey shows very clearly how thoroughly they appreciate the work that has been done. I am very glad indeed to have had my little share in it and I have to thank you very much for the opportunity to talk to you. You have my sincere condolences for having had to listen to the latest thing that happened to be on my mind, that had to be gotten off or it would surely weigh me down, but I am sure that your patience will have its reward somewhere if not here.

As for Dr. Morrison, my hearty congratulations to him and my sincere best wishes for long life and such success in his efforts always as he has secured in his work for the New Jersey State Medical Society during these past half a dozen of years. The old Latin said, *macte, virtute sic itur ad astra*, which I suppose may be translated, "more power to you, that's the way to the stars". We Americans have briefened that into just this, "'attaboy".

Toastmaster: Before introducing the next speaker, I wish you to take up your program and note upon the third page the splendid photo-engraving of the honored guest of the evening, Dr. John Bennett Morrison, then turn to the last page and note the other picture, this last a word picture. So accurately does it fit the life work of the next speaker who will address you that one might almost think that George Eliot had him in mind when he wrote "The most solid comfort one can fall back upon is the thought that the business of one's life is to help in some small way to re-

duce the sum of ignorance, degradation, and misery on the face of this beautiful earth." This, gentlemen, is a word picture of the life work of your next speaker, Dr. Henry O. Reik, Executive Secretary of the Medical Society of New Jersey and Editor of the Journal of the Society.

REMARKS BY DR. REIK.

One does not often thrill with pleasure at the prospect of responding to a toastmaster's call, but in this instance I can truthfully say that I am pleased to accept this opportunity to speak my mind. I do not recall ever before having sought the privilege of speaking at a banquet, but when I heard some months ago that this testimonial dinner was to be given to my very dear friend Morrison, I was so afraid of being overlooked in the galaxy of speakers at your command that I asked President Conaway to intercede in my behalf and to procure for me the privilege of saying at least a few words on this occasion. The request was not based upon any desire to share in the limelight nor upon confidence in personal ability as a public speaker; I know too well my own limitations. I can very honestly say, also, that I feel incompetent now to do justice to the subject but that does not deter me from wishing to pour out my tribute of respect to the honored guest of this evening.

I anticipated that others, selected because of their oratorical skill, their experience in neatly turning a phrase, or even because of their deep admiration for the guest, would entertain you and furnish him with a treat beyond anything I could hope to offer, but I felt that it would be difficult for you to find another who had enjoyed the intimate relationship with Morrison that has been my privilege during the past three years. I even dared to think you might like to have the orchestration of praise to which you have listened tempered by a bit of lighter music from the mouth of one who, though emitting less melodious tones, will speak from a heart that throbs in unison with the hero of the hour.

Damon and Pythias were scarcely closer together than Morrison and I have been since I came to work for and with you. From the commencement of our very first session together in his office we seemed to understand and like each other; why, I suppose neither of us clearly knows even today. Certainly we are unlike in many respects; that very small share of physical beauty which nature bestowed upon us being about the strongest resemblance we have. He would not wish, I am sure, to be described as a handsome man, un-

less you declared in a preface that you believed "handsome is as handsome does", in which event he qualifies for a blue ribbon at the beauty pageant.

The question has often arisen in my mind—what is there about this man that makes everybody love him—and I have only recently secured a satisfactory answer thereto. It suddenly dawned upon me one day that Elinor Glyn had supplied the reason; he had IT. Now, please, don't misunderstand my application of that word, for Morrison is Scotch of ancestry and American by choice, which makes him 100% United States, and properly translated that means virtuous plus. If I correctly interpret Miss Glyn, when she ascribes the possession of IT to a person she means that they have an overwhelming degree of charm and that contact individuals are overpowered by the mysterious forces of personality. I suspect that you have not thought of looking for IT in a man but here is a man walking daily in our midst and constantly using that influence upon you. The manner in which he uses it is not the least peculiar attribute of his character.

In the early days of our association I was tempted to tell him a negro story and I think I have shown remarkable fortitude in withholding it until the present moment. Some of you will remember that there were a number of difficult problems confronting the state society about that time and I was, of course, more or less ignorant of underlying conditions and previous events. It was natural that I should seek information, but in his determination to be absolutely impartial and to avoid planting any prejudice in my mind, this man often put me off in a polite way without definitely answering my question. He, better than most people, understands the importance of the axiom that "silence is golden".

A quarrelsome Baltimore negro of burly stature once attempted to bring about a fistic encounter with a smaller companion toward whom he held a grudge. He started out with a series of impudent and impertinent questions about the little nigger's character, but failed to bring forth any response. Then he tried cussing him roundly for some imaginary offense; still the little chap disdained to recognize the provocation. There followed a series of abusive names which ordinarily arouse the fighting blood, and he even threatened to thrash the nigger if he denied the fitness of their application. Still the little nigger held his peace. Finally, in desperation, he said: "Doggone you, nigger, I'm going to

bust you in the face if you keep on giving me any more of your damn silence."

Do not imagine for a moment that Morrison would not fight if provoked; I have seen fire flash in his eye and heard the rumbling of an advancing tornado in his voice, but he is wise enough to avoid trouble whenever possible, generous enough to overlook small irritants, and he has the courage to exercise self-control. Governed by the Scotch blood in his veins, his words are few and often blunt; but his methods are direct, to the point, frank and open, and never equivocal. Yet, with all, his manner is always courteous, kindly and considerate.

Perhaps no one else is in position to tell you as well as I may the debt of gratitude that the Medical Society of New Jersey owes to John Bennett Morrison. For more than three years he has in a very large measure neglected his private interests to give time and thought to your affairs. Night and day, month in and out, he has been laboring strenuously to advance the interests of the members of this society and of the medical profession at large. If some of the work and the accomplishments of these years may be credited to others, it is only fair to recognize the fact that he has been the inspiration and the guiding genius effecting practically all of these excellent deeds. Presidents come and go. Executive secretaries, committee chairmen, and welfare committee members labor with the minute details of many problems. But, the Recording Secretary of such an organization as this is a good deal like the recording angel—who must be always on the job. In addition to keeping tab upon all the rest of us, he must plan and direct our work and then see that we properly perform it; must bear the burden of unreasonable complaints and ignore the fact that few people ever think to express commendation of his good deeds; must labor untiringly in the interests of the masses, professional and lay, and depend upon receiving his reward in the hereafter.

Good secretaries, like good poets, are born not made. Such a superman is he to whom we tender our respects at this moment: a man of great natural ability to fill the office in which you have placed him; sturdy of character and unflinching in his rectitude; a practical idealist who labors incessantly to make his dreams come true; a "he-man" in every sense of the word, yet possessed of a sufficient degree of the physiologic feminine characteristics to make him lovable. We admire him for what he is, for what he stands for, for the things he does and the way in which he

does them. We hope, of course, that he will be spared to us for many years to carry on and develop the tasks he has visualized, but we doubt not that when he passes from this sphere of usefulness, he will be given work to do in heaven—we hope so, for we fear he would not be happy if he had not some big piece of work demanding his attention.

The *dignity* of this man, John Bennett Morrison, is so great that it has always intrigued me to some day take a liberty with him. I have wanted to feel close enough to put aside formality and address him affectionately. Tonight, I shall indulge myself in that luxury, taking advantage of the opportunity you have afforded me. I have heard but one person ever dare to call him by an informal name, and with full apology to her for encroaching upon her personal domain and private rights, I shall just this once borrow her name for him. "Jack" Morrison, I have taken instructions from you, have talked to you and with you, but never before had the opportunity to talk *at* you. And now that the privilege is mine, lo and behold, I can find fitting words only by quoting from a prayer written by another member of our profession, Dr. Erwin F. Smith. When your days as secretary come to an end, and your worries over our problems cease, may you find that quietude and peace for which the poet asked:

"God of all flesh, when these my days are sped
 Let me but hear the music of the spheres
 Or see, far off, the progress of the years
 And I shall be greatwhile content though dead;
 For to their heavenly music I am wed
 And thrill with subtle thrills, nor yield to fears.
 Thy great Tomorrow wipes away all tears
 And there, as here, Thy law shall be our bread.
 Then let me dwell in some great quiet place!
 Where I may brood in peace on time's deep things
 And all the mystery that round man clings;
 Far off, mayhap, have glimpse of one sweet face;
 And catch the tones of twanging golden strings
 Whereto Thy myriad million stars keep pace!"

Toastmaster: The next speaker, the President of the State Society, as you all know, is from Atlantic City where they all try to do things just a little different from the average. You also know that much depends upon the President being a "good mixer", and in Presi-

dent Conaway we have that best of all types of the good mixer, in so much that while he is a good mixer he never gets mixed himself.

REMARKS BY PRESIDENT CONAWAY

Dr. Morrison, the idea of showing our appreciation of your work by an occasion like this was first discussed by several of us at the last annual meeting of this Society. A few weeks later a plan of procedure, in which this suggestion was included, was sent to over 200 whose names were selected from our membership, for their opinions. While there was, quite naturally, considerable diversity of opinion regarding several of the items mentioned, yet this particular idea met with unanimous approval.

Whatever success the present officers of this society have achieved this year has been due in a great measure to your untiring efforts. Your devotion to duty has been an inspiration to all of us. Your hearty coöperation, your unselfish service, and your promptness and willingness to work for this society at all times, have rendered my duty as presiding officer comparatively easy as well as most pleasant and agreeable. Over 100 of your friends from the twenty-one counties of our state have gathered here tonight to do you honor.

In recognition of your valued services, as a further tribute of respect to you, and as a slight token of the esteem in which you are held by all of us, I am privileged to present you with this gift. (Delivering a very handsome wrist watch.) It is, I believe, some kind of a time-piece, but please do not feel that we are offering it with any suggestion that you be on time for meetings—your reputation for promptness is already well established. We hope rather that it bespeaks a good time for you now, better time for the future, and I think it is way past time when this Society should have expressed its appreciation of your services. May you enjoy having this gift and may it ever remind you of our gratitude for the excellent work you have done and are now doing for the Medical Society of New Jersey.

Toastmaster: Now, before we part, let us have a few words from that much beloved and respected leader of medicine and surgery in northern New Jersey, one whom we too in South Jersey love and admire, Dr. Ill.

REMARKS BY DR. EDWARD J. ILL

I rise with a good deal of misgiving. The toastmaster's call comes without the slightest

warning. Of course I am glad to be here and do honor to an energetic and wise secretary. Few know of the labor he has devoted to the cause of the Medical Society of New Jersey. In these days when things look more complicated, particularly to men of my time of life, it just needs a man of Dr. Morrison's capability to carry on. It has been said, that we honor a man with a dinner; first, because we want to shelve him; and further on for the reason that if he steps out he ceases to be a competitor. In this case, however, we have done the reverse. It has been our desire to encourage Dr. Morrison in his work and to beg him to continue in the arduous duties of a secretary, which in reality always is the axis around which all the physical and intellectual efforts of a society revolve.

To see all the work accomplished these days by the secretary and our good committees, makes me feel derelict in the performance of duty when I was President. A confession is often a good thing and spurs one on to renewed and further efforts.

RESPONSE BY DR. MORRISON

Mr. Toastmaster, my friends in the Medical Society of New Jersey, and Guests:

How in the world am I ever going to thank you for this expression of your appreciation and friendship. This is an occasion that arises perhaps once in a man's life-time, and when I see gathered together here in New York, my friends from every nook and corner of New Jersey for the purpose of extending to me this great tribute, it will be little wonder if a tremor creeps into my voice as I endeavor, wholly inadequately, to express my gratitude.

I want to assure you that it is an added honor to be seated tonight between our President, Dr. Conaway, and Dr. Edward J. Ill. You always choose one of the flowers of our profession for President and Dr. Conaway is a prince of good fellows. Dr. Edward J. Ill, whom we all respect and love, is the dean of the profession in New Jersey. How many of you, young and old, have gone to him with your problems of ethics, economics, medicine and surgery, to be given mature advice, to be received as a friend or treated as a son by a loving father. Dr. Ill's life and character has been an inspiration to me for nearly 30 years.

The first intimation I had of this affair was when Dr. Donohoe requested me to reserve the evening of January 21, for an engagement in New York. He told me he was going to be

married that evening and he could not think of having the ceremony performed without my being present. So, all evening, I have been waiting for the strains of Mendelsohn's wedding march and the appearance of the bride. For 2 years, while he was President, we traveled 10,000 miles over New Jersey receiving a bridal reception in every county. I only regret that he is *not* being married tonight, for then we might expect more Donohoes in the medical profession. This year, Dr. Conaway and I have traveled another 10,000 miles, driving at all time of day and night, in sunshine and storm, in heat and cold, carrying our messages to the county societies. I assure you that one of the greatest joys of my office is the opportunity of making these warm friendships among you, friendships which will bloom and last the remainder of my life.

When, 5 years ago, at our meeting in Atlantic City, Dr. Newman approached me with the request that I stand for election to the office of your Recording Secretary, I spent almost the entire night sitting in a chair on the roof porch of Haddon Hall, turning the matter over in my mind from every point of view. No one realized more fully than I the state of affairs in our organization. We were slowly dying from the dry decay of ultra conservatism, on the one hand, and from the lack of well planned coördinated activities, on the other. There was lack of cohesion, unanimity and purpose; our hand seemed to be against everybody and everybody's hand appeared to be against us; we were not in cordial relationship with the other state boards administering affairs of public policies, and no systematic attempt had ever been made to carry to the public the ideals, aims and aspirations of the medical profession.

The office of your recording secretary needed a man who would conscientiously devote an enormous amount of time, labor, thought, energy and application to the welfare of the Society. I fully realized that I could not do this without a very considerable sacrifice of time and practice. But, believing that every man in a community, every man in a business, every man in a profession, owes to his calling the greatest service at his command, I threw myself into the breach and accepted the responsibilities of the office—responsibilities of the office when administered as I conceived it should be administered.

What has been accomplished is history. But we may modestly claim that history will accord to the last 5 years a greater degree of progress in organized medicine in New Jersey

than in any other 25 years of the existence of our venerable society which, the oldest in America, is now 162 years old.

In this work we have had some very trying experiences but, with no thought of self, we have served the society with a policy of "hew to the line, let the chips fall where they will". We have made a host of friends and a few enemies. The friends we grapple to our soul with hoops of steel, accepting the enemies with sorrow. Show me the man in 10 years of public or semipublic life who has not made enemies, and I will show you a man who has led a sterile life, barren of accomplishments.

Allow me to say at this juncture that I feel greatly embarrassed at this evidence of such a signal honor being conferred upon me alone as one of your officers. I sincerely feel that grouped around this table with me, receiving the recognition and encomiums of the Medical Society of New Jersey, should be seated the Presidents under whom I have served, our genial, cordial Executive Secretary, Dr. Reik—than whom there is no more distinguished executive serving in the ranks of organized medicine in America today—the Chairman of our Welfare Committee, Dr. Andrew F. McBride, Commissioner of Labor in New Jersey, Drs. Hollinshed and Darnall, of the Committee on Scientific Program, Drs. Reddan and Olmstead of the Committee on Arrangements, 3 members of the Board of Trustees, and I am only enumerating these 3 because of my more intimate association with them, Dr. Norton L. Wilson, Dr. James Hunter, Jr., and Dr. Philip Marvel. Without the advice, counsel and enthusiastic coöperation of these men the hands of your Recording Secretary would have been tied and nothing in the long line of accomplishments could have gone down into history. We have thrown 100% of enthusiasm into the work in the hope of securing a 25% return. We have turned on the light of a thousand watt candle in the hope of igniting a hundred watt torch that would continue to burn.

At the headquarters of the American Medical Association in Chicago, and among the secretaries of the other state medical societies congregating there every year, the Medical Society of New Jersey is looked upon as one of the most, if not the most, progressive medical societies in the union. And our medical journal under the able editorship of Dr. Reik has easily taken front rank among state medical journals. All these accomplishments have been a reward, an ample reward for the time and labor spent by your officers. We love and honor the profession we serve and the realization that we have been securing results

commensurable with the outlay has fully repaid us for our every effort.

In our talks to the members of our county societies we endeavor to impress upon them, especially the younger members, the changing aspect of medicine today, the change in the relation of the profession to the public, the change in the attitude of the public toward us and the greater demands they justly make upon our time and special knowledge. We endeavor to impress the fact that the time spent in these great social movements, apart from the actual practice of medicine, brings large returns. I ask them that when they make up their income tax returns and put down so much for office work, so much for bedsides services, so much for surgery, that they turn to the back of their record books and make a few entries for what they have accomplished in the great forward movements for the welfare of humanity. The appreciation and gratitude and pride on the part of patients and the added respect of the community will pay large dividends.

And then I tell them that when they reach the age of many of you around these tables, men who have grown prematurely grey in the service, when the autumn leaves are beginning to fall, and when the snows of winter which cover everything with a white mantle of oblivion are not far distant, when they have hours to spend in their libraries or before a grate-fire reviewing in reminiscence the accomplishments of a lifetime, these activities will pay larger dividends.

When my time comes to retire from the real activities of life and I too have hours to spend in reminiscence and retrospection there will float across my vision the memory of tonight, the great honor you have conferred upon me, the faces of my friends here will shine back through the years and I shall reap splendid dividends from the finest investment I have ever made. What more can I say? With a heart full of gratitude and a deep, warm sense of your appreciation and friendship, I thank you.

The Truth at Last

The truthfulness of people who write in praise of patent medicines, telling of marvelous cures they have experienced, is sometimes in question. The following quotation, which is from the opening sentence of a recent testimonial, may throw some light on this problem of veracity: "Some three and a half years ago I was stricken with rheumatism from head to foot; not even able to use my hands, and only with assistance could I turn in bed, where I lied in agony."—Manchester Guardian.

Special Article

OBSERVATIONS UPON TRAVEL AND CLINICS OF THE 1927 TRIP

Inter-State Postgraduate Medical Assembly,

Albert S. Harden, M. D.,

Newark, N. J.

(Continued from January Journal)

The following day to the Rigshospital, for the formal greetings by the Dean and Faculty. This attended to, and our pictures taken, we were free to visit the clinics. The hospital is both modern and otherwise, the setting beautiful. There is a large, imposing stone entrance to a garden with a fountain in the center and hospital buildings on both sides. Professor Gammeltoft, the gynecologist, was at last able to find his clinic, the hospital having 4000 beds. Gynecology and obstetrics are here combined, and obstetric patients in the hospital are all referred abnormal cases, while persons on the outside having some abnormality may call for assistance and have a man sent out from the clinic. The great majority of deliveries are by midwives, who are required to take a 3-year course of study. Criminal abortion is a rare occurrence in Copenhagen, where, according to our informant, 18% of the population is illegitimate. The great sculptor, Thorwaldsen, was in this class. The unmarried mother is admitted to the hospital, given a number and no questions asked. After the baby is born, it, too, is given a number. During the puerperium a social worker endeavors to get the facts of the case to be all filed in the government records. As no one knows the number given the interested parties, exposure is almost impossible. The government looks after the child as an orphan, providing the mother is unable or unwilling to bear the burden. Later, the child is told its number and can look into the family history if it so desires.

The frequency of perineal tears led Gammeltoft to seek some way of lessening this mishap and, by a procedure he has recently been teaching, he claims a 50% reduction. His method consists in using downward pressure on the occiput during the stage where the head appears on the perineum, instead of supporting the perineum as all of us have been taught. This, he claims, keeps the head well flexed until after the occiput is born. We were taken next through the department, into the examining room where we saw several interesting cases, one being a large cyst of the vaginal wall, then into the operating pa-

vilion where several operations for salpingitis and simple ovarian cysts were performed, but saw nothing of special interest.

We visited the medical clinic of Professor Faber who spoke on "pernicious anemia", of which he had seen 123 cases. In all of these he noted achylia gastrica, which he thinks may have been due to nonsterilization of the small gut by the acid, and his treatment is large doses of HCl, accompanied by 200 gm. liver and 400 gm. kidney daily. The most common age incident is between 49 and 59.

Although the Finsen Institute was not on our program, several of us decided to visit it. Why it had not been included I leave to your own judgment. Dr. Kraber was in charge and took us around. The institute is large and is in the midst of flower gardens. We were taken into the treatment rooms, after putting on colored glasses of a special make, to diminish the effect of the glare from the large arc lights. The arc is used for the treatment of pulmonary and bone tuberculosis. Several patients sit around the light, stark naked. Of course, the patients are in different rooms, but all in the same undressed condition, and all wearing colored glasses. Female nurses are in and out with cooling drinks, as the arc gives off great heat. There are some whose treatment is shorter than others, the treatment being a gradual one. From these treatment rooms we were taken to a room used for lupus treatments. This is a large assembly room with treatment tables, above each of which is a large shielded arc, the shield containing several tubes about 2 in. diameter, 3 to 4 ft. long, and freely movable. At the end of each of these tubes is a quartz filter, and a small glass window between the tubes has a small space in which a stream of water flows, allowing the light rays and not the heat to come into contact with the diseased area. Treatment is given by attendants. Here, too, glasses are worn by both attendants and patients. After a certain period of time a gong rings and treatment is over for the morning. There were numerous cases under treatment when we were passing through. As to ultimate results, we spoke to several patients who had been there for several months, who said they did not see any improvement and were leaving soon, as they said the treatment was too long and too expensive. We were shown a room where radium emanations were forced through a door to treat cancer. Dr. Kraber uses Finsen light in treatment of encephalitis; 20 to 30 minutes daily with good results. In his series of cases all gave a previous history of influenza.

That evening we were entertained at the Tivoli, a miniature Coney Island, but situated

in the heart of the city; a place in which 8000 people can be comfortably entertained. The following day we visited the Raadhus, which is similar to the one in Stockholm, although older and not so beautiful. We were eager to see the bells referred to before, and after climbing 312 steps, arrived at the balcony just below them, where a wonderful panorama greeted our eyes from an elevation of about 350 ft.; even the coast of Sweden was visible. During our stay in the tower the bells rang out but, to our surprise, they were not as harsh as when we were on the ground. There is a large museum in this building well worth seeing. From here we visited the famous museum of the sculptor Thorwaldsen; built similar to a Pompeian tomb and in the court Thoralwaldsen is buried.

The next day Professor Shaldemose gave us a surgical clinic in a modern amphitheater, this being a teaching institute. This large room also had the automatic shades and skylight shades that I mentioned in Upsala. The patient, a woman, was brought in, and in good English the professor explained the case to us and said he expected to find numerous gallstones as she reported many attacks of colic but no jaundice. The patient was then taken to another room and etherized. During this time the professor and several of his assistants scrubbed up and nurses came in the arena with buckets of fluid, with which they proceeded to flush the floor. It was fortunate they all wore boots. Even after the patient had been wheeled in, under ether, this procedure was continued, until it seemed as if there was at least 2 in. fluid over the floor. We counted 18 persons in the arena, all of whom had some part in the operation. One of our men walked up several steps to secure his camera to take a picture of the crowd, but by the time he returned to his seat the professor had removed the gall-bladder and had it open showing us, just as he had said that it was, full of small stones. Time $3\frac{1}{2}$ minutes. His incision was the Kocher, but at least 10 in. long. He repaired this gash with silk-worm gut, and out the patient went. The second case was a "chronic osteomyelitis of the femur" with sequestrum which he treated very rapidly, pulling out one piece of bone that looked almost like the entire femur. Shaldemose is about 51 and is one of the quickest operators that I have ever seen. Am sure that if such a crowd assisted in operation in this vicinity, some one beside the patient would be cut.

We again visited Professor Gammeltoft and he showed us through his X-Ray Department, which is very complete. The motors are in a room separate from the treatment room, thus eliminating the noise and odor. A nurse

administers the treatments, while calibrations etc. are done by the physician. He also has a quantity of radium, and claims 25% cures in carcinoma of cervix over a 5-year period.

The early afternoon saw us on our way to Hamburg, necessitating a 3-hour trip across the Baltic, but as the sea was calm and a German band willing to oblige, the time passed quickly. Before we realized it we were warping into the dock at Warnemunde and from there moving by train to Hamburg. The following morning to the Eppendorf Hospital, built on the pavilion plan with a capacity of 3800 beds. We were met by Professor Brauer, dean of the hospital, who very kindly showed us around the grounds lined with linden trees and flower gardens. The wards are immaculate. The diet kitchen for metabolic cases is a sight in itself. Nothing is left undone and thoroughness is the keynote. Each patient is numbered and each diet written out and prepared according to special prescription for that individual. All nurses are required to take a special course in dietetics and cooking. They are now building a large modern research laboratory as the present one is very antiquated and insufficient for the wealth of material. Professor Sudeck, successor to Geheimrat Professor Kummel, gave a clinic. While he may be a good man, everything went wrong that morning and neither of the 2 operations, hernia and thyroid, was he able to finish. He excused himself and we called upon Professor Heynemann, but were again disappointed because he had nothing to show. From here to Professor Kummel, an elderly, jovial fellow, who lectured to us upon "kidney surgery." He does not believe that there is such a thing as primary tuberculosis of the kidney, hence an early diagnosis is difficult. Furthermore, a kidney infected by this disease never heals, the only treatment being removal. In the beginning, they are always unilateral and early operation has given 95% of cures. These cases always start as a papillitis, but not in the cortex, as is commonly supposed. Sometimes it is very difficult to find, but careful study will always show it. Kummel cited one case in which he made 1200 sections before he found the lesion. The so-called healed cases show a putty-like degeneration of the kidney, but they are not cures. Tuberculous testes is an ascending infection. It is impossible to acquire a tuberculous vesiculitis from the bladder. Papilloma of the kidney is always malignant. Kummel gave a lantern-slide demonstration of some very fine sections of tuberculous lesions of the genital tract.

Professor Shautmiller was the next one visited. He gave a very fine clinic on "syphilitic aortitis" which he claims occurs in from

50% to 80% of all those infected by syphilis. The parts involved he divides into 3 areas; (1) above the coronaries, (2) at the coronaries, (3) a mixture of both. No. 1 gives the best prognosis. In No. 3 the main symptoms are pain, cardiac asthma and enlarged heart. He treats very energetically with KI, salvarsan and Hg.

That afternoon we decided to see Carl Hagenbeck's Zoological Park, where instead of keeping the animals in cages the enclosures are so arranged as to give one the impression that the animals are not confined. You feel prepared to run until you are told that it would require a very agile animal to jump the ditches and the walls that are so skillfully concealed. We passed a very interesting afternoon seeing many rare and interesting animals in nearly natural surroundings. It is said that all of our circuses are supplied by the Hagenbeck Company. In the evening we were entertained by the Hamburg physicians at the "Uhlenhorster Fahrhaus," situated on the Alster river, where we were introduced to all the physicians of note, the Burgomeister and others of the official family. After refreshments were served, including an ample quantity of "hola," we adjourned to the lawn and witnessed a very beautiful display of fireworks in our honor.

The following noon found us on our way to Leipsic, which city boasts of the largest railroad station in Europe, and it is certainly a "whopper." Leipsic is noted for several things. It is first the center of the fur trade, and on several of the streets for many blocks, on both sides of the street, there are nothing but fur shops; secondly, it is the center for music, such men as Schumann, Mendelsohn and Beethoven having been intimately connected with the musical history of this fair city; and thirdly, it is a great center for book binding and printing.

Professor Sellheim, at the Frauen Klinik, was our host the next day and we listened to a most interesting talk on the "mechanism of labor," with many phantom demonstrations. His demonstration of operation for prolapsus simply emphasized the importance of bringing the vesicovaginal fascia together, as well as the rectovaginal fascia, which operation he demonstrated later. He then took us to his operating room, where he demonstrated his technic in repairing a vesicovaginal fistula; dissecting away the scar tissue, sewing up the rent in the bladder by a purse string suture of catgut, and imbricating with a second layer of sutures, the vaginal mucous membrane being likewise treated. After a self-retaining catheter had been inserted in the bladder, the viscus was filled with water to see if the repair

leaked, the catheter being left in for 3 days. At completion of the operation, a silkworm gut ligature was inserted through the anterior lip of cervix and labia majora and tied it, to bring the uterus down as a sort of splint for the bladder.

Next we visited the surgical clinic of Professor Pyer, who did some very excellent surgery of the joints. One thing that impressed me most was his method of avoiding adhesions by use of 1% pepsin in Ringer's solution. This solution must be made up fresh weekly, to be efficacious. As Pyer relieves adhesions of some former operation, he applies this solution; and in fact on all raw surfaces in abdominal surgery.

Professor Assman's clinic was then visited. He stated that there are over 1,000,000 cases of tuberculosis in Germany and that 100,000 die annually. The economic loss by this disease is around \$750,000,000. At present there are 72,000 in sanatoriums, 25% of whom are there through error in diagnosis. Assman says the first place he looks for tuberculosis is beneath the clavicle at the outer side. As to lung tumors, he sees on an average of 25 cases per year, due to the cobalt mining; one-third of all miners of cobalt die of carcinoma of the lungs.

Professor Morowitz gave a very instructive talk on "diabetes." He is a fanatic on the use of synthalin, giving as high as 30 mg. in 24 hours. He states that 1 mg. of synthalin burns up 1 gm. of carbohydrate and that in elderly people with mild diabetes it is very beneficial; the consensus of opinion is that this drug is of little value. I simply state this as part of what was seen and heard.

That evening we were entertained by the medical men and the city officials at the New Rathaus, by a formal reception and dinner. The banquet hall was beautifully decorated with flowers and at the central table a massive bouquet of red, white and blue flowers, fully 15 ft. high, immediately attracted attention. Speeches of welcome from the Burgomeister and several of the professors, in which friendship for the Americans was stressed, were listened to with much interest. We then had the pleasure of listening to two of the Grand Opera stars; a wonderful soprano and an equally fine baritone, who sang several solos and duets. The following evening we had the good fortune to hear them in an opera of Verdi's, "Power of Fate." At this opera house, Beethoven was at one time conductor and the present orchestra, it is claimed, is made up of the descendants of the original one which Beethoven conducted. Be that as it may, it is certainly good. The following morning there was a trip around the city and out to the famous Denkmal, a gigantic monument

commemorating the Napoleonic War for it was on this ground that the battle of Leipsic was fought.

Thence on our way to Munich, home of the famous brew. Arriving after an all day trip, and still going strong, several of our party could hardly wait until dinner was served, so anxious were they to visit the famous Hofbrau Haus, which was convenient to our hotel. This famous place is where all two-fisted beer drinkers congregate. It is 3 stories high and contains some 6000 seats. The higher you go, the higher the cost of a stein, and the highest price is about 17 cents. It is said that here a keg of beer is tapped every 5 minutes. The place beggars description and must be seen to be appreciated.

The following morning to Sauerbruch's clinic. Unfortunately for us he had been called to Berlin the day before but his assistant showed us numerous postoperative cases. The assistant, unable to speak English, had an interpreter and we managed to get along very well. He showed numerous thoracoplasties; between 1911-1915 Sauerbruch had performed 648 for tuberculosis. He first does a phrenicotomy, and if sputum and fever increase thoracoplasty is contraindicated. For local collapse, in cases of small superficial cavities, he uses injections of paraffin, which at times he has to remove. Among the conditions exhibited were: removal of the tongue for carcinoma 5 years ago, patient being now perfectly well and able to phonate; a sarcoma of the thigh, in which Sauerbruch removed the entire femur, amputated the foot, turned the leg upward and placed the external condyle in the acetabulum, creating a new thigh which is fully controlled by the patient; construction of a new nose by using the cartilage of the ear; 3 cases where bullets had been removed from the heart, all now hale and hearty; another where he had made an artificial esophagus by cannulizing the skin of the chest and turning the skin inside out, anastomosing the esophagus to this, then performing a gastrotomy, the last procedure making unnecessary the artificial esophagus, as the stricture later healed.

From here to Von Moller, who spoke to us on "lung infections," stressing the mode of peribronchial and tuberculous infections. He teaches that they all begin at the hylus and extend toward the apex; that there is no such thing as a sterile wound; that so-called postoperative pneumonias are purely embolic, that oxygen is an irritant to the lungs and often the cause of pneumonia.

That afternoon we visited the old city castle of King Ludwig. It contains 385 rooms, but the best I could do was 160, which included

his private art gallery, several throne rooms and his private apartment decorated mostly in gold. The afternoon was nearly spent and so were we when we at last reached the open air.

The next morning to Sauerbruch's clinic again where we had the pleasure of seeing him perform a thoracotomy under local anesthesia in 5 minutes. He removes only 2 to 5 cm. of the ribs, resecting all of the ribs if the patient can stand it, at one sitting.

From here we rushed over to Professor Doderlin's clinic. He has a modern hospital, built and run by Catholic Sisters, containing 250 beds and used mainly for obstetrics, running about 1500 cases a year. He had 2 cesarean sections, doing one by his vaginal method and the other extraperitoneally through a Pfannestiel incision. Although quite elderly, he is a clever operator. He uses boric acid powder on his abdominal wounds, claiming that it is mildly antiseptic and lessens the chances of skin infections.

That afternoon to the National Museum, where everything produced or made in Germany is shown. As our time was limited, we were only able to see the high spots. The chemical part was extremely interesting; dyes, perfumes, substitutes for food, the majority of which were byproducts of coal. On the top floor they have a room in which they demonstrate the heavens at different times of year; it is a dark room and the illusion is so perfect one can easily imagine himself looking at the true heavens. The different stars are shown and their orbits traced, as well as a demonstration of the lunar eclipse. A very wonderful piece of mechanism.

That evening to the opera to hear Rigoletto by a very good company, and the following morning to Strasburg. Our journey through that community was very picturesque, as it skirted the Black Forest and we were able to see many quaint old villages, as well as get our first glimpse of the vineyards on the terraced hills. Finally, to the Rhine, which was crossed by a new steel bridge, and we arrived shortly in the famous old town which has been besieged and fought over more than any other town or city in Europe.

During the day we listened to a lecture by Professor Burell, given in French, on "cancer." He is working on the theory of protozoid irritation and has been able to show this by numerous cultures, which he has inoculated into animals, thereby causing malignant growths. He believes that rat inoculation is a graft and not a true inoculation. He has rats that he has been able to graft through many generations. While he is very earnest and enthusiastic, much that he said was lost to us because of our inability to understand the

language. I was more than sorry because I think he has something worth while to tell.

That afternoon we were taken for an auto ride through the Vosges Mountains to the Convent of St. Odile, the patron saint of the blind. The convent was built about 800 years ago and is situated 2100 ft. above sea-level. The view from there is superb, as it was all of our return trip through the wonderful forests. That evening we were entertained by the Governor of Alsace together with the medical men. Unfortunately, French was spoken by the majority of our hosts and we were unable to appreciate what was said, although many toasts were given in champagne and as soon as some one raised his glass, we knew what that signified and did likewise. A wonderful military band played for us to dance and all enjoyed the occasion.

The following day was spent in sightseeing; a walk along the banks of the Ille river to see the patient fishermen (I never saw one get a bite), and to see the wash-women, who hire a wash-board and a place on a flat-bottom boat, anchored in the river. It is remarkable how clean they can wash your clothes in such a dirty river. From there to St. Thomas' Episcopal Church, dating from 1240, and filled with divers monuments and sarcophagi. At the back of the chancel is the Marshal de Saxe mausoleum. In a side chapel are 2 mummies, the Count of Nassau and his daughter, embalmed about the middle of the seventeenth century, encased in glass and looking quite natural in their original clothing. From there through many winding streets to the cathedral, symbol of the town and most venerable of its edifices, the most ancient portion dating back to 1015. It is of Gothic design, similar to the cathedrals of Cologne and Notre Dame. In fact, we were told that all 3 cathedrals were designed by the same family. It is a tremendous structure with a total height of 461 feet. Strange to relate, the ancient stained glass windows dating from the twelfth to the fifteenth centuries are nearly intact, as is the beautiful rose window, 45 feet in diameter; strange because of the numerous fires, earthquakes and bombardments this church has been subjected to. The famous astronomical clock is one of the wonders of the church, built in 1352; the mechanism being repaired, it was rebuilt in 1570 and again in 1838. It contains a perpetual calendar indicating all the movable feast days (automatically adjusting for leap years) and the courses of the planets, eclipses of the sun and moon being indicated; small figures to indicate the days and hours move about; quarter hours are indicated by a child, an adolescent, a man and an old man passing before the figure of Death and

striking a bell; on the hour Death strikes the bell; at 12 o'clock the 12 disciples pass before the figure of Christ and are blessed, while a cock at the top of the clock claps its wings and crows twice; altogether a most interesting spectacle to witness.

Late that afternoon found us in Heidelberg, the famous university town on the beautiful Neckar river, full of anticipation for the sights that were to unfold before us. We were not to be disappointed.

The following morning we went to the clinic of Professor Menge. The hospital is old but in fair shape. Several American students were there taking the regular medical course. Dr. Menge performed an operation for prolapsus under the caudal anesthesia, in which he is a firm believer, ether being seldom used. It is more of a twilight sleep, however, than anything else, as he gives $7\frac{1}{2}$ gr. veronal the night before, another $7\frac{1}{2}$ gr. 3 hours before operation, and 1 hour later $1\frac{1}{6}$ gr. morphin with $1/200$ gr. scopolamin. Fifteen minutes before operation he injects 60 c.c. of a solution of 1.5% novocain with 10 drops of adrenalin. It worked beautifully in this instance. He also uses "dilaudid," $1/30$ gr. instead of morphia, it being synthetic and having the same effect without the after-effects of morphia. His operation consisted of an amputation of cervix, then a wide dissection of the mucous membrane of the cervix and vagina, suturing the vesicovaginal fascia high up, pushing the bladder under same, then going above and doing an external Adams-Alexander, which he considers the best of all operations for displacements.

From here we went over to see Professor Enderline, Willms' successor, who showed us numerous interesting cases among which were several of skin grafting, using the tunnel method.

That afternoon we were taken through the university, one of the oldest seats of learning, dating back to 1386. The present buildings are old but well kept. We were taken to the Carcer, or student prison, in which for any infraction of the rules of the city or college they were incarcerated for periods of various lengths. To while away the time, many have painted their pictures on the walls, while others not so artistically inclined have simply painted or carved their names. Our guide pointed out several names familiar to us; one a prominent surgeon in San Francisco. From here we were taken to the castle, built in 1303 and added to by different ones until 1563. In 1689 it was partially destroyed by the French and later, in 1693, the last building the "poder tower" was demolished by the French general Melac. The forest park surrounding the ruins

is one of the most beautiful in the world with its old, old trees and English ivy, covering the ground instead of grass. The view down the Neckar valley is very fine on a clear day when one can see Mannheim on the Rhine twenty miles distant. There still remains the famous wine cask, which has a capacity of 50,000 gallons of wine and on top of which is a small dancing floor. This is the largest of four casks that were built by four successive boasting Lords, in the days when these casks were used as a method of collecting taxes. This being a great wine district, each wine maker was required to give so much of his wine to the Lord of the Castle yearly as a tax. It is said that only once was the large cask filled to capacity. One legend was that the keeper of the castle enjoyed the distinction of drinking 16 quarts of this wine daily, dying at the early age of 74. If he had abstained, no telling how old he might have lived to be. From here down the mountain and back across the river to the Hirschgasse where the famous duels were fought in the good old days. It being now *verboten*, they must travel outside the district to fight. It is a quaint old tavern with the original tables bearing the names of many famous Germans artistically carved. There is the famous duelling room with its blood bespattered floor, the colors of the different corps adorning the walls, the first aid chair, where the gashes were sewn, still showing the blood and hair of past duelists. It is a rough sport, so carefully supervised that though disfiguring, there was no danger of loss of life. The duel is the initiation of the student into his particular corps; he must fight 7 duels before he is a full-fledged member. Each duel consists of 30 rounds of 4 slashes at each other. As all of the anatomy is covered except the face and head, this accounts for the scars on the unprotected parts. We were anxious to see one of these duels, but as they are now held at a distance from Heidelberg and secretly, we were doomed to disappointment.

That evening we were entertained by the physicians of Heidelberg at the Europaisher Hof, a modern hotel where we met all of the physicians, danced, and had a generally good time. The following morning was devoted to medicine, Drs. Morrow and Krehl giving clinics. The former gave a very interesting demonstration of the Morrow reaction to external stimulus in infants during the first 3 months of life. After that time the reaction is pathologic and indicates Mongolian idiocy or microcephalus. The test is performed by making a sudden noise near the infants, such as clapping the hands, when the infant's hands will suddenly shoot out in an encircling move-

ment as if to grab and hug someone, the lower limbs following to a lesser degree. He says that this indicates that at some time in the long ago, we were descendant from the Simian family and at any undue noise the infant grasped the mother around the neck while she made her escape through the trees; another argument for the evolutionists. Be that as it may, it was very interesting.

In the afternoon our journey continued to Frankfort-on-Main. The following day being Sunday, we were taken for a tour of the city. The Old City was particularly interesting and one is transported to medieval times in architecture; the Gothic cathedral built in the fourteenth century; the Roemer City Hall with its Kaisersaal where the portraits of all the Kaisers from the beginning of the empire are arranged around the walls the Roemer Hall where the merchants met and arranged prices. Across the street, through the small windows we were able to see the quaint houses projecting each story beyond the lower one, and most ornately painted with allegoric figures. We followed up one of these streets (they are a perfect maze, no wider than alleys, the upper parts of the houses almost touching) and suddenly emerged onto a court where all previous decorations seemed drab in comparison, where yellow, green and blue were the predominating colors. We were informed that it was in one of these particular houses that the "great plague" started. Wandering through these narrow streets with peculiar shaped houses and their paintings, we again emerged onto a square where a large building of the same type as the others was pointed out as being the Rothschild homestead, but, of course, not occupied by them now. Further on was the house in which Goethe was born, filled with remembrances of this great man.

From here a drive of some 20 miles brought us to Bad Homburg, where we were taken through the grounds and different cure-houses, testing some of the springs and finally ending up at the large swimming pool where a few of us indulged in a dip. Then back to the main building where we sat down to one more banquet. This being the day before the Fourth of July, the orchestra played numerous patriotic airs and as it grew dusk, lanterns of our national colors were hung on the trees and the fountains were illuminated. Numerous samples were handed out as we were leaving, and back to town we drove tired but happy.

Although the following day was our national holiday, we wended our way to the State Hospital and witnessed Professor Schmeiden operate. His first case, an amputation of the breast was completed in 12 minutes. The next

operation was for removal of a foreign body from the stomach. Prisoners, he explained, very often swallow cartridge cases, pieces of bed springs, nails and large pieces of wood. They are sent to the hospital for removal of these objects and during their convalescence, try to escape. He then showed us a jar full of foreign bodies that he had removed. This patient under operation had a small piece of bed-spring that had started through the duodenum. He was able to push it back into the stomach and then, through a small anterior incision, remove the object. He sewed up in the usual manner, the entire operation not taking longer than to narrate it. The next case was an amputation of the thigh for sarcoma of the femur. While he did not hold out any particular hope for this patient, he thought there was a chance. At this hospital, as well as at the majority of hospitals in Europe, cotton gloves, dry sterilized, are used instead of rubber ones. Schmieden's preparation of the skin is different from any yet seen. He uses 5% tannic acid in alcohol, and for the oozing of wounds uses salt solution and adrenalin compresses. He showed us a series of cases he had operated upon for adherent pericarditis. He makes a trap-door incision, exposing the heart, then strips the pericardium, beginning with the left ventricle, which he says is the secret of success. Otherwise, there would be a rapid engorgement of the right ventricle through inability of the heart to empty itself.

Professor Holdfelder then spoke upon "cancer and its treatment by x-rays." He distinguishes 2 types of cancer cells, the active and quiescent, and applies his rays by pressure through a papier-mache cone. His machine is 200,000 volts. Results are very gratifying.

That evening we were the guests of the City of Frankfort at the International Exposition of Music. We were shown the grounds and the buildings where they exhibited every imaginable musical instrument. There was Edison's first phonograph, African tom-toms and the evolution to the drums of today; weird looking instruments which gradually evolved into horns, saxophones and other musical instruments in common use today. A song festival was on, as we emerged from the building, in which some 5000 children sang in unison. After listening, we again engaged in the pastime of wining and dining, which by this time had become just a matter of routine; but as we all remembered the day was the Fourth, before the evening was over we had celebrated, perhaps not wisely but too well, for the best of Rhine wines were in front of us in quantities sufficient to satisfy the most ardent "wet."

The next day saw us on our way to Mayence on the Rhine where a special steamer was waiting to convey us on a scenic trip down the river, with its vineyards terraced up the mountains on each side and its numerous old castles, mostly in ruins but each having an interesting legend. Our trip ended at Coblenz across the river from Ehrenbreitstein where our boys held the bridge-head after the armistice, a most formidable looking fortress, the Gibraltar of the Rhine, and a quaint old town. From here we took train for Cologne, which, while not on our itinerary, was made so at the insistence of the physicians and city officials to the American Express Co., that they be allowed to entertain us. Our stay in Frankfort and in Paris was curtailed so that we could remain and I am sure that the few hours spent in Cologne will long be remembered.

Our trip to Paris was of great interest to all, as we were now entering the country which the Germans had invaded, and all expected to find evidence of devastation, especially at Namur and Liege. We were doomed to disappointment, as nowhere on the trip was there a sign of the war. The fields were under cultivation, the towns had been rebuilt and the factories were working full blast as if nothing had ever happened.

We arrived in Paris at 2 a. m. An elaborate program was arranged for the Eye and Ear and Medical sections during the forenoon, so a great number of us took in the sights that we might not see during the afternoon, such as the Opera House, the Madeleine, Maxims and the shops. That afternoon we were taken on a tour of the East side of Paris, visiting the church built in 1706 where Napoleon is buried in a wonderful, massive, reddish marble sarcophagus, which is placed in a circular arena about 30 ft. below the main floor of the building; built it is said so that every one visiting this great man's tomb must, of necessity, bow his head in reverence. Back of this tomb on the main floor is an altar of lovely design and workmanship. On each side are windows of such a color that, no matter what kind of weather it is outside, the effect is of the sun shining. This we know to be a fact as we were caught in a downpour while visiting there. Napoleon's brothers, Joseph and Jerome are there, as are 2 of his Generals, Duroc and Bertrand, and Marshals Turenne and Vauban. This building is part of the Hotel des Invalides which was built originally for wounded soldiers, but is now a war museum, containing numerous trophies of the wars in which France has engaged in the past 2 centuries. It was built by Louis XIV. in 1671; is a large stone building with

an inner court, the Court of Honor, measuring 130x62 meters. This court is used on special occasions of a military nature. Surrounding rooms contain war relics and flags captured from the enemy and a large room contains armor from the days when knights were bold. From here we visited the Eifel Tower and the famous Trocadero theater, where we saw nothing to become excited over, as it is very much the worse for wear. From here to meet the Dean—Professor Rogers—of the Faculty of Medicine.

That evening to the *Bienvenue Francaise* at the old Solomon Rothschild mansion, a wonderful building with lovely gardens, where the usual wining and dining occurred.

The following morning to the Tarnier Clinic to see Professor Brindeau. He is using a rather remarkable, as well as startling treatment for uterine sepsis (postpartum). The uterus is brought outside of the abdominal cavity through the usual median incision, the incision is then closed by interrupted sutures of silver wire, thus anchoring the uterus outside of the body. It is then covered by hypertonic salt cloths which are kept moist. The treatment sometimes continues for 6 weeks. It is claimed that the mortality has been reduced 50%. After the temperature has remained normal for a few days, the incision is reopened and the uterus replaced. It seems a very radical procedure, but desperate conditions sometimes require desperate remedies.

Charcot's Clinic at the Hospice de la Salpêtrière was visited and found extremely interesting. This clinic is under Professor Guilian. If one wishes to study syphilis and its various sequels, here is the place. Although a nerve clinic, fully 75% of the cases here are of syphilitic origin. A few of the high spots are as follows: Parkinson's disease is contagious; treatment, stramonium leaves, 50 gm., very satisfactory. Early sign of encephalitis is the blinking of the eyes on striking the bridge of the nose with the finger (called nasopalpebral symptom). General paresis, 35% cures by the malarial treatment. Multiple sclerosis is an infectious disease and good results are obtained with salicylates in the beginning; later colloidal gold and silver. Friedrich's ataxia is congenital and not due to birth injuries.

That afternoon we again visited places of historic interest, the Champs Elysées; the Arc de Triomphe, with the grave of the Unknown Soldier underneath the arch; Notre Dame, the famous cathedral, the architecture being similar to that of Strasburg and Cologne, although both of these seem larger, probably due to the spires which are absent on Notre Dame. The interior of this church is marvel-

ous, especially the 3 rose windows which throw such a soft light into the church. From here across the Seine, passing the church that was struck by the Big Bertha during the war killing and maiming many worshipers. While the roof has been repaired, the point of shell entrance is quite noticeable. It is claimed that Notre Dame was the object sought, but that it was missed fortunately by a quarter of a mile. Our next stop was the Pantheon, or the Church of St. Genevieve, the Patron Saint of Paris, now used as the burial place of France's noted dead; Voltaire, Mirabeau, Victor Hugo, Emil Zola and others. The frescoes of the building are the best known of France, depicting the stories of St. Genevieve, Joan of Arc, and many saintly heroes and heroines. That evening to the Grand Opera House, a beautiful structure nearly a century old; its wonderful foyer, marble steps and galleries are things that will long be remembered.

The following morning to the Institute Pasteur where we were shown through the building by Professor Calmette. This building is one of the most modern that we had visited. We were taken into the crypt where Pasteur is buried, which is in the main building; then across the street to the infectious disease and experimental chemistry buildings. The professor is very enthusiastic regarding his immunization to tuberculosis, giving bovine tuberculosis serum by mouth. He has given nearly 25,000 children this treatment, all of whom were of tuberculous families and, so far, with excellent results. He uses the B. C. E. bacillus for immunization by injections. It is pathogenic, made by himself and carefully tested. He is a very interesting character and intensely interested in his work on immunization. From here we were taken to the Hospital Broca, a very ancient building, to see Professor J. L. Faure operate and give a movie of gynecologic operations.

A paper of this character would not be complete unless a word of praise were given to the Program Committee and its chairman, Dr. Crile, for the wonderful clinics we had the pleasure of visiting and to the American Express Company for its great efficiency in arranging transportation and accommodations. During our entire trip we were transported by special private trains, a baggage car accompanying us; our only thought of this commodity being the placing of tags on the aforesaid baggage before leaving our hotel and seeing it again in our rooms at the next stop. Tips and customs, the bane of continental travelers, were nonexistent so far as we were concerned and it is my personal opinion, as well as that of many others to whom I talked, that this added greatly to the pleasure of all.

It was made possible by the 4 representatives of the Express Company, who traveled with us, one of whom was always one step ahead.

Our return on shipboard was of great interest, in that each day meetings were held in which a resumé of each clinic was discussed and notes taken. There were 165 in the party, 38 states and the Dominion of Canada being represented, and while we were busy at all times, there were numerous opportunities for both sightseeing and relaxation, since it had been arranged that there was only one night spent upon a continental sleeper.

Medical Economics

M. D. Harris, M. D., Chicago

(Reprinted from the Jour. A. M. A., Nov. 26, 1927)

It is a trite aphorism that doctors are poor business men, by which is meant that the average doctor knows nothing about the underlying principles of good business; that he is unacquainted with the laws of economics, and that as a rule he is the most gullible of all men when it comes to investing money. Unfortunately there is too much truth in the statement. Why is it that doctors use so little judgment when it comes to matters of business? It is because they practice a profession that for centuries has dwelt in the shadow of altruistic tradition because they have been so wrapped up in the scientific aspect of their work that they have neglected to a great extent the material affairs of life; because they have had little or no training in business affairs; because by reason of listening from day to day to the ills and complaints of their patients, which they assume to be true, they have become unduly credulous; because by their efforts to inspire confidence and hope in their patients they have become optimists and have permitted their optimism to extend too much to affairs outside their profession. All of these because, showing, as they do, the beautiful and lovable side of the physician's nature, explain, perhaps, why he is such a poor business man, but they do not contain any cogent reason why he should remain one.

The sociologic relations of the physician are daily becoming more complex. They are now very different from what they were 50 or 25 or even 10 years ago; and unless the physician gives a little more thought and study to the economic problems of the day, he is certain to be the loser. Economics in its general sense is the science that investigates the conditions and laws affecting the production, distribution and consumption of wealth or the material

means of satisfying human desires. In this sense the word has a wide application, but it is frequently qualified by limiting its meaning to some particular branch of human endeavor. In this discussion I shall limit its application to the practice of medicine. Even when the subject is thus qualified, it presents many problems of great importance to the physician.

There are 4 parties deeply concerned in the subject of medical economics: the physician, the patient, the profession as a whole, and the public. There is no vocation in which the question of economics enters so largely as it does in the practice of medicine, nor one in which so many persons are involved. When one enters on the practice of medicine, one assumes certain duties and obligations to the public, to the profession and to the patient as well as to himself. The obligations to the public and to the profession are in a sense moral obligations; those to the patient are of a contractual or legal nature as well as a moral one, while those to the physician himself, except under certain conditions, are subordinate to the other two.

It is a natural and laudable ambition of every physician to succeed in his profession and to secure as large a practice by honest and legitimate means as he can.

The average physician, strangely enough, gives little thought to the question of economics and to the psychologic effect on the people of the things which he does. Take, for instance, his relations with the numerous so-called diagnostic laboratories that are springing up all over the country, many of which are owned and conducted by laymen. These laboratories exist only by reason of the support given them by the physician, but the physician seldom realizes what he is doing when he refers his patients to them. He doesn't seem to appreciate the fact that he is not only curtailing his own business but also that of the profession at large.

COMMERCIAL LABORATORIES

When a person is sick, he naturally turns to the doctor as his first resort, not only to tell him what the trouble is but also to advise him how to get well. When a patient goes to a doctor, who finds on making his examination that a urinalysis, or a blood count, or some other of a dozen simple tests should be made, which the doctor is incompetent or too lazy to make, and so sends him to one of these commercial laboratories to have the test made and a report thereon sent back to him, who can blame the patient for saying to himself, "If a doctor has to send me to a laboratory to have my urine examined, why can't I take it there

myself and get a report and thus save the doctor's fee?" Many of these laboratories encourage just this sort of thing. Some of them have elaborate printed forms which give the normal composition of the urine or blood or what not, and any slight deviation from this is checked on the report so that the patient's attention is drawn to it, whether of any significance or not. Incidentally, he may be advised what to do to correct this apparent abnormality.

Some of these laboratories organize clubs, agreeing to examine the urine of the members at regular intervals for so much a year, and to advise them what to do in case any abnormality is found. Do you realize how many patients are lost to the profession in this way, and, worst of all, how much bad advice these patients are receiving from such institutions, and do you realize that it is all your own fault? Some of these institutions advertise that they are equipped to give hypodermic medications, intravenous injections, arsphenamin treatments, mercury rubs, colonic flushings, etc., and have the audacity to ask physicians to send their patients to them for such treatment, offering *sub rosa*, of course, to divide the fee with the physician referring the case.

Every physician ought to know how to make the simple clinical tests and should be equipped to make them. Any physician who is not competent to make them should not practice in that class of cases. Any physician who is too lazy to make them should have respect enough for his confrères to refer such cases to them instead of to a commercial laboratory, and any physician who is too busy to make them is busy enough to have an assistant to do the detail work for him. The same applies to the giving of the simple treatments just mentioned. The loss of a patient or of a fee is not the only evil connected with this method of practice. The psychologic effect on the patient is bad. It begets the feeling of distrust of a doctor's ability and creates a tendency to seek unqualified advice.

THE CARE OF MINOR AILMENTS

Another source of loss to the profession is the failure of most physicians to give proper attention and care to those suffering from so-called minor ailments. Those of the profession who have worked up a good practice and who have acquired a reputation do not seem to want the minor cases. They want only the big things, the interesting cases, while those who ought to take care of them do not think of them properly. The result is that these patients flock to the cults and quacks. They make up the bulk of the practice of the irregu-

lars, who, convincing the patient that he had some serious and remarkable condition which the physician had given up, performs a "marvelous" cure and thereby receives undeserved credit. The medical profession should waken from its lethargy and see that these patients receive proper care and attention. At the last several examinations for licensure in the state of Illinois the number of chiropractors, osteopaths, etc., exceeded that of the regular profession. It is not unreasonable to suppose that there must be some demand on the part of the public for the service of cultists, otherwise there would not be such a large number desiring to enter their ranks. May not the reason be that they give to the people a personal attention and consideration that is being neglected by the regular profession? This is a matter of considerable importance, not only to the physician but to the patient as well. The medical profession should see that these patients receive proper care and treatment and are not manhandled under the mistaken idea that some portion of their anatomy needs adjusting.

MANAGEMENT OF HOSPITALS

Another matter of importance is the management of hospitals. The physicians should devote time and study to the business end of hospital management, as well as to the professional end. It will not do for a physician to say that he doesn't care anything about the management of the hospital so long as he has a good place to take his patients. Do you ever stop to think that the chances of having a good hospital where you are at liberty to take your patients and treat them according to your own ideas are constantly growing less? And that hospital management is being dominated more and more by laymen who fail to understand and appreciate the professional side of the situation? Lay boards of trustees of hospitals are beginning to think that every patient who enters a hospital belongs to the hospital and that it is the duty of the board to determine who shall take care of him. The attitude of the lay superintendent of a hospital is well shown in a recent article that appeared in the daily press of one of our large cities, in which he said, "Physicians are necessary adjuncts to a hospital, but they should have nothing to say in regard to who their confrères should be." Now an adjunct is "that which is joined to something, but is not as essential part of it." Is it not interesting to know that doctors are not an essential part of a hospital and that they haven't sense enough to determine whom they shall work with, or to have anything to say about the hospital management? I am not at all in accord with this

idea. I believe that medical men should predominate in the management of every hospital, and furthermore I believe that there are doctors who have business sense enough to undertake the work. The hospital is the physician's workshop, and when a workman ceases to have something to say about the management of his shop he has lost his independence and soon finds himself working under some one else; in the doctor's case, under the dictation of laymen.

It should be the duty of all physicians who are actively concerned with hospital work to see that the primary purpose of the hospital—namely, the care of the sick—is not diverted or minimized by the prevailing passion for so-called standardization, which seems to have obsessed so many organizations and institutions today. Hospitals are being flooded with elaborate questionnaires, some of them asking questions which no self-respecting institution would answer, such as the names and salaries paid its superintendent and other employees, and the names and particular religion of the members of the staff, and are being overrun by young inspectors who have no knowledge of, or experience in, the management of hospitals, each with an arbitrary yardstick with which to measure and rate the hospital according to the dominant idea of the institution doing the rating. One will rate the hospital on the basis of its physical equipment; another on its scientific paraphernalia; a third on the percentage of autopsies held on the dead; a fourth on the number of beds and its facilities for training interns; a fifth on the willingness of the members of the staff and all others practicing in the hospital to sign an iron-clad stultifying oath concerning fees, which it is acknowledged cannot be enforced and which, as is well known, is constantly being violated by a large percentage of its own members, and so on down the list, while no one seems to have grasped the idea of rating hospitals according to the amount of good they are doing in the relief of human suffering, having in mind the economic conditions of the community served.

Physicians must have strength of character enough to assert themselves in the management of hospitals. They must be imbued with the high ethical principles of the profession and see that all those who work with them are likewise ethical. This is a duty they owe to themselves, their profession, their patients and the public.

Another source of economic loss to the profession is the selling of the physician's knowledge and skill to lay corporations organized for profit who resell the knowledge thus gained back to the patient at a much higher price. Many physicians throughout the coun-

try by reason of their undue credulity and under the guise of altruism have been imposed on in this way and are now selling their services to a jobber to be resold. This is not only a direct financial loss to those engaged in the work, but a breach of the obligation which every physician owes to the profession as a whole, as it lessens the confidence which the people have in its ability, lowers its dignity, and detracts from its independence. The agitation which was raised against this practice a short time ago has already borne fruit, as one of the large insurance companies that formerly contracted with a corporation to do this work has now given it up and refers its policyholders to their family physician, where they belong, to make the periodic health examinations.

(To Be Continued)

Esthetics

The advent of "old age" seldom worries members of the medical profession, partly because average longevity within our professional ranks is not creditably high, and partly because most physicians are too busy trying to prolong the lives of others to think often about their own advancing age. When opportunity or indication does lead to rumination upon this subject, however, the majority probably think of that period of life as delectable in the sense that they hope to utilize it for greater enjoyment of the esthetics of life. Appropriate to that view were the remarks of our distinguished fellow citizen, Dr. Henry Van Dyke, of Princeton, on the attainment of his seventy-fifth birthday anniversary. He gave vent to so much wisdom in response to the queries of interviewers on that day that we feel like reproducing it for our readers.

The Herald-Tribune of New York, in a special item from Princeton, November 10, said: Dr. Henry Van Dyke, author and professor emeritus of English at Princeton University, who celebrated his seventy-fifth birthday today, declares that while college students today perhaps do more work, they do not seem to have as good a time as they did in his own undergraduate days.

In an interview at his Princeton home, Avalon, Dr. Van Dyke, who is in good health and is eager to accomplish more of the work which he has set before him, said:

"The college stage in a man's life is one of stabilization and mobilization. Then is when he finds his full power and gets his feet firmly planted. Since my time, college life has be-

come more organized, perhaps more work is done, but the students don't seem to have as good a time as they did in my day. They are too much occupied with many interests to allow for individual enjoyment."

Dr. Van Dyke said that the thought that today was his seventy-fifth birthday was sober, but not solemn, and nothing to worry about.

"A man's birthday is one of the things for which he doesn't feel much responsibility. It just comes along. He can't take any credit for it. And he ought not to be blamed for it. It is only a day like other days. A little work, if God is good to him. A little pleasure, if his friends are kind to him. And so to bed, to get ready for another day if it comes.

At 75 a man can't expect many more joyful surprises, but he can be happy enough in an Indian summer kind of way. His health has been spared and he has a 'reasonable, religious and holy hope.' He can still enjoy books and music and good talk. The morning air is sweet to him and the evening shadows have no fear in them. He can still hook and play and land a big salmon or a big basketful of trout, and a clean pipe still tastes sweet. His memories of the old familiar faces are clear and bright. Sure, he has nothing to complain of and much to be grateful for, even in an era when gratitude seems to have gone a little out of fashion.

Of course, I'm not satisfied with the use I've made of these 75 years. Who could be? But I am thankful to have lived in a most interesting time and to be still alive, with a good bit of work before me if the lamp holds out to burn and brave young friends to comfort me for missing the old ones who have gone into the world of light ahead of me."

The New York Times, December 3, having induced Dr. Van Dyke to talk about modern writing and music, submits the following:

"The joys of reading masterpieces and hearing beautiful symphonic concerts cannot be excelled. I like jazz in moderation. It has a dancing rhythm.

A main cause of the lack of appreciation of good poetry today, is the fact that the people of this generation do not know how to read and won't take the pains to learn.

They roar, or squeak, or mumble, and fancy they are reading. They are not—they are only mangling the English language.

I do not care much for what is called free verse, except when it is written by a person who has a natural sense of new rhythms, as Walt Whitman had at his best. A great part of it is simply the product of laziness combined with the spirit of revolt. It is not really free, and it is not usually verse, but semi-in-

toxicated prose. Luckily it is going out of fashion."

Just the sane sort of reasoning we would expect from this charming young-old man, and those of us who are "growing old" would do well to ponder on some of his points and plan to progress toward the end as gracefully.

Medical Ethics

STOP, LOOK AND—THINK!

John Hammond Bradshaw, M.D., F.A.C.S.,
Orange, N. J.

This title does not refer to automobiles on four wheels. It has only reference to automobiles on two legs. It is commonplace to refer to this age as the "get and gobble age." But the times that give us our telephone, our movies and our airships, give us, fortunately, also such conditions that if we linger along or fail to bestir ourselves somebody else will gobble our grub and get our best patient. The pity of it all is that while we concentrate on the good material things we need, and work hard to keep the pot boiling and ward off the wolf from the door, we sometimes fail to breathe into our lungs the fresh air and neglect to look up to see the beautiful sunsets, and forget altogether about the glorious health-giving sunshine that we can have without money and without price.

In our streets it is daily demanded of us that we stop; and with or without volition we are compelled to look; but as Edison says we all of us surely hate to *think*. Now why on earth should we think: Is not all our thinking done for us? We go to church and feel so good after the minister has done our moral thinking. We can read that sapient editorial in our favorite paper and delude ourselves that the ideas are our own and we actually think we are thinking. We can doze in our chair at the movies and honestly and absolutely stop all cerebral effort. What we are expected to think is printed in caption letters before our lazy eyes, and the optic nerve and not the cells of the cortical brain does all the work. True, this may give beneficial relaxation and be of actual benefit if used in moderate doses, but how about the constant and long continued administration of such "intellectual" food?

Do we often read our books in order to think? We calmly admit we read our newspapers and many of our novels and detective stories *to keep our minds from thinking*. In this way they fill an aching void, a vacuum

that would exist if we allowed ourselves to sit alone with folded hands.

One would naturally think that professional life would be one devoted to constant thinking. This it rightly should be for here the incentives to stimulative thinking are unsurpassed. But no one who has practised medicine for a term of years fails to realize how easy it is to get into a groove; indeed it is far easier to slip into a groove than it is to get out.

Those mysterious apartments in our brain where we keep assorted our usual methods of procedure often get dusty. They frequently need some little change in the position of the furniture. The pictures must sometimes be rehung. The windows must be thrown open for new air and light. Even new friends must be invited to sit on the chairs.

There is a sad facet to professional life. It is a side that many of us see. But we seldom see it till late. What I refer to is the time when we have more work thrown upon us than we can humanly accomplish.

Industry, ability, ambition, position, prosperity, accomplishment, popularity (I almost said fashion) are *great driving forces* and when they get their grip upon you—look out! Stop while you can and think! Of course you are a success; of course you are doing wonderful things (and of course you are making money); of course you have high professional standing; but, are you happy? Are you satisfied? If not, why not? Stop and think!

Lay Mirror Reflections

ANOTHER ILLUSION SHATTERED

How frequently have we heard it said that medical quackery flourishes in America, but is almost nonexistent in Europe; that legal and scholastic requirements for admission to professional ranks are so high, and the laws so well enforced; that the average of scientific proficiency is higher in foreign countries than in the United States and that irregular practitioners are not tolerated. Particularly has Germany been lauded as the model for us to admire. Well, we always had our doubts about it but lacked the facts that would justify a flat contradiction of these statements.

Two years ago, visiting in Paris, we discovered that there were a goodly number of osteopaths and chiropractors, mostly originating in the United States, practicing in that city and at the more famous French seaside resorts. Knowing that the law of France forbids the practice of medicine without a license and that said license is ex-

ceedingly difficult to obtain, we asked a French physician why these unlicensed, irregular "healers" were not prosecuted, and received the ingenuous response—"The Government does not concern itself because they practice only upon rich Americans, not upon the French people". That explanation may or may not set forth the whole truth; again we are skeptical because we have no reason to believe that our own people are so very much more gullible than those of other nations.

In Germany, it now appears, the quacks have not limited themselves to exploiting the American branch of Barnum's supporters.

QUACKS KILL 5000 IN GERMANY YEARLY

Medical Fakers Permanently Injure Thousands More—Extermination Is Demanded

(New York Times, January 17, 1928.)

BERLIN, Jan. 16.—More than 5000 Germans are killed annually and the health of many more is permanently injured by quackery and criminal malpractice, according to an estimate of the German Health Officer, published today. The number of quacks practicing throughout the country is at least 50,000, the report says. Most of them have only a common school education and no medical training at all.

The fakers usually pose as homeopaths, naturopaths, biochemists and the like, and most of them do a land-office business.

It has been ascertained that a Hamburg swindler who pretended to make diagnoses from the eyes and hair had 400 patients daily and would have had more if he had been physically able to handle them.

At a recent medical congress a prominent physician called the enormous growth of quackery in Germany the greatest disgrace in Europe and demanded that the Reichstag amend the lax laws for the supervision of medical practice.

The present agitation is largely due to discoveries made through an investigation of the methods of a "sanitarium" which was destroyed by a recent explosion in Dahlen. The police learned that this institution sold enormous quantities of medicines, salves and pills which, it advertised, would cure all kinds of diseases, but which consisted only of garlic, chalk, camomile tea and vaseline.

Julius Blanke, the manager, confessed that he had never studied medicine, but said he had obtained the degree from an American University. He will be prosecuted in the criminal court, as the police charge that he made injections of drugs in several cases.

According to a statement of Dr. Schrader, chief of the medical section of the Police Department, the capital has dozens of similar fake sanitariums, not to speak of alleged private hospitals run for criminal purposes.

A former mechanic named Werner Hauser was sentenced to 4 years in State prison recently by a Potsdam court for killing several women patients by giving them insulin injections. Hans Schermutzki, another Berlin quack, was sent to prison for several years for treating cancer patients with a salve consisting of unsalted butter and pot-cheese.

Observations from the Lighthouse

PRACTICAL VALUE OF ELECTRO-CARDIOGRAPHS

Having last month presented a review of recent literature regarding the frequency of cardiac disease and recognition and treatment of some of these conditions, and having observed that many skilled practicing physicians seem, when spoken to about it, either unfamiliar with the use of electrocardiography, or sceptical as to its value, we wish this month to direct attention to that factor in the diagnosis of heart troubles.

Fortunately for our needs, the official publication of the California State Medical Society—California and Western Medicine—in the issue for November, presented a series of short, practical articles on this subject; articles prepared for "the bedside doctor." We are taking the liberty of borrowing this excellent material for presentation to our own readers, believing that the opinions here expressed will prove both instructive and helpful to those physicians who may not yet have investigated the question for themselves. It may be noted, in passing, that some of the "portable" machines recently put on the market bring electrocardiography within the reach of nearly every practitioner; they are not very expensive, and they are extremely practical.

THE ELECTROCARDIOGRAPH—ITS PRACTICAL VALUE

Henry H. Lissner, Los Angeles—The more one sees of the bedside application of the electrocardiograph the more one is impressed with its clinical value. At the outset it is necessary to have a definite and clear understanding of what the electrocardiograph actually tells.

Its great worth is found in the recognition of heart muscle insufficiency and the arrhythmias. It gives very little information with regard to valvular diseases of the heart. In the interpretation of the tracing it is also extremely necessary not to read out of it more than is actually in it. Its place in heart diagnosis is dependent on the correlation of the clinical aspect of heart disease with the heart tracing.

Compared with other laboratory methods, and with the personal equation of the cardiologist under control, it is much more valuable and gives more exact data than any other diagnostic laboratory method. Its technique is definitely standardized and, unlike the x-ray, its interpretation is not subject to psychologic quirks. If the interpreter follows accurately the known data of cardiography, two separate observers must have the same opinion of a given tracing in the greater percentage of all tracings. However, electrocardiography and its clinical application is still in its infancy, and there remain at present certain types of heart conditions in which there is an honest difference of opinion. These differences of opinion are not especially referable to the arrhythmias, except of ventricular origin. It has been noticed in the extra systole, where the beat does not come through to the radial pulse, that the electrocardiograph shows an excursion on the tracing much larger in comparison with the normal ventricular beat, and at the same time the palpating hand feels

a greater precordial impulse. The exact significance of this fact is still in question.

A knowledge of electrocardiography is desirable for every practicing physician and specialist. Every doctor thinks he knows something about x-ray interpretation, but at medical meetings the description of a heart tracing is of interest to few physicians except the cardiologists. Few physicians ask for a heart study with the same alacrity or frequency as they do for an x-ray study of their patient.

Universities seem still to teach that the diagnosis of heart diseases necessitates the presence or absence of a murmur, and the modern intern nearly always will think of heart diagnosis in these terms. The "Leistungsfähigkeit," or the actual measure of the function of the heart muscle is usually a secondary consideration; and yet from actual bedside practice its determination is the only definite prognostic adjunct which is of value to both clinician and patient. The knowledge of the elements of an electrocardiograph places the individual at the end of the auscultating stethoscope in a more analytic and alert frame of mind. It helps him separate the elements of the cardiac cycle and evaluate abnormal sounds with greater accuracy.

There should be a more intimate association between the cardiologist and the general practitioner. The cardiologists should be given a few salient points with regard to the clinical findings and symptoms of the patient in order that certain types of heart-tracing curves and deviations from the normal might be studied and statistics compiled from them. The general practitioners should understand the types of tracings that they may have a clearer understanding of the technical reports on their patients.

Many times the electrocardiograph will indicate a disturbance of heart function where auscultation fails to elicit anything other than weak muscle tones or indefinite murmurs. Examples of these are disturbances of conduction, right and left bundle branch block, arborization block, toxic myocarditis, postflu, and many other secondary heart muscle deficiencies.

An electrocardiographic tracing is of special value to the surgeon. Many deaths which follow operations might be prevented if the surgeon had a better knowledge of the heart function before performing the operation. There are many conditions in which elective surgery is done in which, because of this lack of study, a fatal result takes place. In fatalities from operations for thyroid diseases, gall-bladder disorders, hysterectomies for fibroids, and prostatectomies, the cause is often ascribed to emboli. Many of such deaths are due to simple heart insufficiency, which an electrocardiograph would have detected in case the stethoscope had previously failed. It is just as important for the surgeon to know about his patient from an electrocardiographic standpoint as to have information from an x-ray, cystoscope or other laboratory machine. It should be considered just as negligent for a surgeon to operate on a patient without having made a careful study of the heart as it would be for him to set a fracture without the x-ray as a guide.

J. Edward Harbinson, Woodland—Knowledge of the field of usefulness and practical value of the electrocardiograph is gradually becoming more disseminated. The average physician still regards this instrument of precision as an expensive toy of the cardiologist and knows very little about its practical application in the elucidation

of the cardiac arrhythmias; the importance of the curves in estimating the degree and type of myocardial damage; and the value of the graphic finding in prognosis and treatment.

As with any laboratory procedure the electrocardiogram should never be the sole means of estimating the patient's cardiac status. The history, physical findings, and the simple clinical tests for estimating cardiac function should always be the fundamental factors in diagnosis.

A great majority of the cardiac irregularities may be identified without the aid of graphic tracings. The commonest of these, sinus arrhythmia, although easily recognized and of no clinical importance, is often erroneously interpreted as a serious disorder. There may be some difficulty in differentiating between extra systoles and some forms of fibrillation without much arrhythmia, or conversely, when extra systoles are very frequent.

It is generally known that extra systoles usually disappear after exercise; however, it is not so well known that they may be increased by exercise if the heart muscle is severely damaged. An auricular flutter with irregular ventricular rhythm may be mistaken for a fibrillation, or fibrillation with partial or complete block may simulate various other types of irregularities. A heart block manifests itself in a variety of forms. Many similar variations in the other types of cardiac irregularity are confusing. An exact diagnosis is often the key to treatment and is of invaluable aid in prognosis.

In the absence of clinical symptoms we depend upon alteration in the character of the heart sounds, degree of cardiac enlargement, valve lesions, hypertension, arterial changes and inferences drawn from other findings to estimate myocardial damage. Diagnosis of myocardial insufficiency based solely on these factors is often unreliable. It is in this field that the electrocardiograph is most useful. Signs such as an increased P-R interval or heart block, bundle branch block and other types of ventricular block, abnormal inversion of the T deflection, give us direct evidence that the myocardium is not normal.

Considering these findings in conjunction with our history and physical examination we are able to give the patient a much more satisfactory and reliable opinion regarding how much work his heart is able to do and whether the condition is transient or permanent.

Tracings in cases of acute infectious diseases like diphtheria, influenza, and pneumonia often give us a clearer understanding of the toxic effects of the disease on the myocardium than the evidence we are able to obtain clinically.

The electrocardiogram is a valuable guide in the administration of digitalis, quinidin, and other drugs used in cardiac therapy. By following the changes in the P-R interval and in the form of the T wave, which digitalis, produces, the administration of this drug may be controlled intelligently. At times digitalis may produce serious cardiac poisoning without nausea or vomiting. Quinidin and quinin derivatives should never be given unless we have the best knowledge obtainable on the condition of the cardiac musculature. These drugs may give rise to complicated disturbance in rhythm and serious disturbance in conduction if given to patients with marked myocardial changes.

With an exact diagnosis of the type of cardiac irregularity and a more accurate knowledge of the condition of the heart muscle than may be

acquired through clinical examination alone, the physician, through the aid of the string galvanometer, is better prepared to answer the questions of the patient in regard to prognosis.

The electrocardiogram is a permanent record which often tells a more accurate story than the description of the clinical findings on the day the tracings were taken. Periodic tracings give an accurate résumé of the patient's progress to supplement the descriptive record.

The frequent use of the electrocardiograph to confirm diagnosis of cardiac arrhythmias and to estimate myocardial insufficiency helps the physician to reach and maintain a high degree of proficiency.

It is hoped that in the future greater use will be made of this instrument by the general practitioner. The patient and physician alike will profit greatly by the additional practical information given by the tracings in cases of suspected or true myocardial disease.

John C. Ruddock, Los Angeles—The portable electrocardiograph, recently developed, has suddenly awakened the medical fraternity to its value as a diagnostic aid. Unfortunately, because there have been only a few electrocardiographs available in any given locality, and because the instruments are delicate and require trained technicians, their use has been restricted in the past to only a few cardiologists. This explains why the average physician regards electrocardiograms as too complicated and mysterious to understand, whereas they are quite simple. This is unfortunate, for the patient thus fails to get the benefit and value of an examination that would help more accurately to diagnose and prognose his condition.

The electrocardiograph, like any other laboratory instrument, should never be used per se, but as an adjunct to a careful history and physical examination. With its aid we are able to demonstrate with a graphic tracing, serious myocardial changes, which cannot be proved by any other means; and we are also able to classify accurately the various cardiac irregularities and arrhythmias.

The electrocardiogram enables one to analyze 96 to 98% of the arrhythmias, which is perhaps 6 to 8% more than can be worked out by the tracings taken by the polygraph. It gives detailed information as to the origin and passage of the contraction wave over the heart. It helps to elucidate many points observed clinically and on which the pathologist cannot offer any assistance. The various arrhythmias frequently do not display the typical picture and are then not easily diagnosed by the noninstrumental methods of examination, and when 2 or more of these functional conditions are present in combination the problem is often too obscure for ordinary bedside diagnosis. The detection of impaired conduction in the ventricle and the accurate differentiation of the ventricular type of paroxysmal tachycardia from that of auricular origin, both of which are of distinct importance in prognosis, are dependent upon the use of the electrocardiograph. In regard to which valve, if any, is affected, the electrocardiogram offers evidence of but indirect value and not infrequently is of no assistance.

Electrocardiography may be said to have 2 distinct limitations: (1) it usually fails to demonstrate pulsus alternans, and (2) there are a few electrocardiograms which are difficult to interpret. With experience the latter tend to become

rarer. The use of the electrocardiograph forms, of course, but one of the methods of cardiac examination, and to be most helpful must be employed with proper cardiac examination. It should not be allowed to lessen one's efforts to make accurate diagnoses without this aid, but, unmasked, the failures by its use, should react like similar postmortem reports—to guide and stimulate toward greater efficiency in diagnosis.

The ability of the heart to perform work depends entirely on the condition of the heart muscle. It is not difficult to detect a dilated heart, auricular fibrillation, or any of the common valvular lesions with their accompanying signs, but it is difficult at times to detect, clinically, sclerosed coronary arteries, branch bundle lesions and infarcts. A coronary sclerosis or thrombosis gives characteristic changes in an electrocardiogram and may be the one deciding factor concerning the advisability of operating upon elective cases.

Surgeons should require more careful heart examination on all elective operative cases over 40 years of age, and this examination should include an electrocardiographic tracing. A hurried auscultation by an anesthetist just before operation is of no value, as it gives no clue to the status of the myocardium, which is the controlling factor. The surgeon is given a false security; whereas, were the myocardial condition fully reported, the operation could be so arranged as to minimize any cardiac embarrassment or be abandoned entirely. The surgeon who has electrocardiograms done routinely on all of his elective operative cases over 40 years of age very materially reduces his postoperative cardiac mortality.

The differentiation between flutter, paroxysmal tachycardia and fibrillation is sometimes very difficult to determine clinically, but is fairly simple with a tracing. The successful treatment in these cases depends entirely upon the correct diagnosis.

The standardization of electrocardiograms eradicates the personal element so often found in x-ray interpretations, and leaves a permanent record for comparison with later tracings. The type of machine used makes no difference, as the tension of the string is always standardized before the tracing is made so that one millivolt displaces it 1 centimeter.

Too much emphasis cannot be given to a careful history, physical examination and the usual laboratory procedures in any heart examination. An examination, however, is not complete without an electrocardiogram, as it may be the deciding factor in explaining such clinical findings as muffled heart beats, gallop rhythm, low blood pressure, cardiac pain, shortness of breath, epigastric distress, tachycardia, extra beats, bradycardia, effort syndrome and arrhythmia. With the aid of the electrocardiogram as an adjunct to our examination, we can give a more accurate opinion and prognosis and regulate more intelligently the life of our patient in conformity to the condition of the heart muscle.

The practical value of this machine then depends upon its more general use by the average physician and surgeon, both as a diagnostic and prognostic aid and as a measure of myocardial competence in preoperative examinations. Its value as a means of differential diagnosis of the various arrhythmias and irregularities has long been known.

In the words of a master, Thomas Lewis: "Electrocardiograms have placed the entire ques-

tion of irregular or disordered mechanism of the human heart upon a rational basis, so giving the worker the confidence of knowledge; they have influenced prognosis and have rendered it more exact; they have potentially abolished the promiscuous administration of cardiac poisons, and have clearly shown the lines which therapy should follow. These records used as clinical observations have stimulated and directed a host of laboratory researches, anatomic, physiologic, pathologic, and pharmacologic, of a valuable nature."

In Lighter Vein

A New Angle

We're thinking of writing a scenario with a novel twist. A war story. The hero goes to France and his regiment stops at a farmhouse. The farmer has no daughter. This makes the hero so mad he goes out and wins the war.—Judge.

Pro Bono Publico

A reader writes in and wants to know if Thomas Jefferson was married when he wrote the Declaration of Independence.—Judge.

Lively Corpse

Greenwaldt later staggered into a roadhouse near by with a story of having been attacked and killed by bandits.—Wilkes-Barre (Pa.) paper.

Damming the Flood

Molly (weary of sermon, in very audible whisper)—"Mummy, if the church caught fire, would he stop then?"—Punch.

Squirmy Season

"What makes you so uneasy? Is your conscience troubling you?"

"No; it's my winter underwear."—Boston Transcript.

A Reasonable Request

Doctor—"I'm sorry, but I can't cure your husband's talking in his sleep."

Wife—"Can't you give him something to make him talk more distinctly?"—Cornell Widow.

A Scotchman went to the box office after witnessing the new show. "Will ye kindly retain me the amount of the amusement tax?" he said.

"Why?" asked the manager.

"I wasna amused," said the Scotchman.—A. C. Trolley Talks.

A current advertisement points out that if it weren't for the automobile American farmers wouldn't be where they are. And neither would a lot of pedestrians.

At St. Luke's Hospital, Chicago, a neurologist hypnotized a patient while another doctor performed a serious operation. These are the methods that have made American night clubs famous.—Jack Shuttleworth—In Judge.

Robinson—I met my wife in a very funny way—I ran over her in my car and later married her.

Brown—If everybody had to do that there wouldn't be so much reckless driving.—Tit Bits.

Communications

TO TREASURERS AND SECRETARIES OF COMPONENT COUNTY MEDICAL SOCIETIES.

(Open Letter from Dr. J. B. Morrison.)

The incumbent of the office of Recording Secretary, possessed with great patience, very frequently has placed upon his shoulders blame that does not justly apply to him or his office. We are now carrying for the benefit of the membership several forms of insurance. Every member of the state society is also entitled to Fellowship in the American Medical Association. Theoretically he is entitled to these privileges and rights just as soon as he joins a county society and pays his dues, local and state, to the treasurer of his county society. But, practically, and under the provisions of our *Constitution and By-Laws*, he is not a member of the *State Society* until his name and dues to that body have been forwarded by the treasurer of the component society, to Dr. Elias J. Marsh, 400 Van Houten St., Paterson, N. J., treasurer of the state society.

This complaint, that the county treasurers do not do their duty in this respect, is as old as the state society. During the past year 3 members have had their cancelled checks, endorsed by their county treasurers, in their own possession for over 3 months, in 2 instances for 3 months, without their names or a remittance having been forwarded to Dr. Marsh.

And the Recording Secretary of the State Society Gets the Blame

In many instances the secretaries of the component societies, after each meeting where new members are elected, forward the names to me, but the treasurer of that county fails to make a remittance to Dr. Marsh until it suits his own convenience. This year I have had *eighteen* letters from the agents of the U. S. F. & G., Insurance Company, and *eighteen* letters from the American Medical Association inquiring why such a doctor is not listed as a member of the state society.

Here is where I break loose and place the blame distinctly where it belongs. This office cannot and should not carry it any longer. We are doing everything in our power to advance the interests of the state society and of organized medicine, to encourage membership, to see that the members, especially the new and reinstated members, get their rights and privileges, but we cannot accomplish these results without the active and conscientious coöperation of every county society secretary and treasurer.

J. B. Morrison,
Recording Secretary.

(Letter from Dr. J. B. Morrison regarding Medical Defense Policies.)

I am enclosing a letter from the United States Fidelity and Guaranty Company, with an endorsement for our Master Policy, of which I am custodian, eliminating Section 10 of the policy. As this removes any implied favoritism or favorable bias on the part of an insured doctor testifying for another insured physician, it cuts the ground from under the opponents to Group In-

demnity Insurance because of the presence of this provision in the contract.

(Copy of letter)

United States Fidelity and Guaranty Company
Faulhaber and Heard, Inc., Agent,
31 Clinton Street
Newark, N. J.

December 3, 1927.

Dr. J. B. Morrison,
66 Milford Avenue,
Newark, N. J.

Re: PSD—12002 New Jersey State Medical Society Policy.

My dear doctor:

We forward herewith, for attachment to the above policy, endorsement eliminating condition No. 10.

For your information will advise that similar endorsements are being forwarded to each physician now insured with us.

Yours very truly,
Faulhaber and Heard, Inc.,
Signed by Louis O. Faulhaber.

(Copy of policy endorsement)

It is hereby understood and agreed that condition No. 10 of this policy, and which is as follows, is hereby eliminated in its entirety:

"10. Any assured shall give, when requested, testimony in court without demanding or receiving any charge or fee therefor from the Company, but this condition shall not be construed to exclude the payment of any necessary expense incidental to such testimony which may be incurred by such assured."

This endorsement became effective as of October 1, 1927.

J. B. Morrison, M. D.,
Recording Secretary.

ANTIDIPHTHERIA CAMPAIGN

(Letter from D. C. Bowen, Director of Health,
State House, Trenton, N. J.)

Dear Dr. Reik:

I am enclosing the information which I agreed to send you during our conversation on December 14 and regarding which you later wrote to me. This material comprises:

(1) A tabulation of diphtheria cases and deaths for 1927 up to the present time by counties and by months. (Deaths to October 30).

(2) A list of cities, boroughs and townships in a number of counties of the State in which our records show that toxin-antitoxin and the Shick test have been offered at public clinics maintained by the local board of health or board of education or the two jointly. The approximate total number of persons who have attended such clinics and received the test or treatment or both is given for each county for which this information is available. In most instances these totals do not include the persons who have attended clinics during the present school year.

This list is by no means complete for we know that in Essex, Passaic and Bergen Counties considerable work of this nature has been done without the assistance of the State Department of Health and our records of such work is not complete. We are about to start a state-wide survey by mail to secure more complete data regarding

the extent of the use of toxin-antitoxin and the Shick test, and we hope that this information will be available in the near future. This will make it possible to furnish you with more accurate and detailed figures than we can give at present, but the enclosed data may be useful for a preliminary statement in your publication.

We have no way of ascertaining the number

of children given toxin-antitoxin by physicians in their private practice. It is a fact, however, that where clinics have been held in the schools, directly thereafter physicians practicing in such communities were called upon to immunize many children. I was told by one physician that he had immunized about 200 children within a period of about 3 weeks after toxin-antitoxin had

REPORTED CASES OF DIPHTHERIA IN NEW JERSEY
BY COUNTY, FROM JANUARY 1, 1927 to DECEMBER 19, 1927 (inc.)

County	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Atlantic	30	20	19	25	8	9	5	1	8	5	7	6	143
Bergen	44	42	39	37	45	38	32	31	35	42	96	37	518
Burlington	6	9	10	14	8	7	6	4	5	9	14	8	100
Camden	124	72	88	97	78	63	27	21	44	41	40	43	738
Cape May	2	0	0	0	1	0	2	1	1	6	7	0	20
Cumberland	8	11	5	8	5	3	2	1	2	4	2	6	57
Essex	66	74	70	54	91	84	64	54	55	87	163	99	961
Gloucester	5	7	4	1	4	3	1	0	1	0	8	0	34
Hudson	114	100	126	129	119	127	83	101	82	172	168	104	1425
Hunterdon	2	2	5	0	1	3	5	1	1	0	0	3	23
Mercer	7	4	10	14	10	13	3	3	8	9	7	8	96
Middlesex	14	9	7	23	11	23	4	14	12	49	53	22	241
Monmouth	15	8	5	4	8	9	9	5	4	9	23	5	104
Morris	1	2	2	13	15	12	4	4	7	27	19	22	128
Ocean	0	0	0	0	0	2	1	0	0	0	2	0	5
Passaic	33	32	51	35	24	25	25	19	31	40	46	51	412
Salem	3	2	1	1	1	5	1	0	1	0	0	0	15
Somerset	1	2	3	2	5	0	0	2	0	4	4	0	23
Sussex	0	2	1	0	0	0	0	2	0	0	0	0	5
Union	45	39	28	32	31	38	22	23	17	47	74	38	434
Warren	6	2	1	2	0	3	0	2	6	3	3	1	29
Total	526	439	475	491	465	467	296	289	320	554	736	453	5511

Prepared in the Bureau of Local Health Administration, Trenton, N. J.
December 19, 1927.

REPORTED DEATHS FROM DIPHTHERIA IN NEW JERSEY
BY COUNTY, FROM JANUARY 1, 1927 TO OCTOBER 30, 1927 (Inc.)

County	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Total
Atlantic	4	1	2	1	0	2	0	0	2	0	12
Bergen	4	2	4	3	6	4	4	4	3	4	38
Burlington	3	2	0	0	1	0	1	0	2	1	10
Camden	4	1	4	5	6	3	1	3	1	5	33
Cape May	0	0	0	0	0	0	0	0	0	2	2
Cumberland	0	1	2	0	0	1	0	0	0	0	4
Essex	5	2	11	2	8	2	6	6	5	11	58
Gloucester	1	1	1	1	0	0	0	0	0	0	4
Hudson	8	4	5	10	8	8	6	6	8	8	71
Hunterdon	0	0	0	1	0	1	0	0	0	0	2
Mercer	0	0	2	1	0	1	0	1	1	0	6
Middlesex	1	0	1	2	0	3	1	1	1	6	16
Monmouth	0	2	2	0	1	0	1	2	1	1	10
Morris	0	0	0	1	0	1	0	0	1	1	4
Ocean	0	0	0	0	0	0	0	1	0	0	1
Passaic	0	0	2	0	2	1	3	0	0	1	9
Salem	2	0	0	0	0	1	0	0	0	0	3
Somerset	0	0	1	0	0	0	0	0	0	1	2
Sussex	0	0	0	0	0	0	0	0	0	0	0
Union	1	1	1	3	1	3	2	1	1	2	16
Warren	2	0	0	0	0	0	0	0	0	1	3
Total	35	17	38	30	33	31	25	25	26	44	564

Prepared in the Bureau of Local Health Administration, Trenton, N. J.
State Department of Health
December 19, 1927.

been offered in the schools, whereas there had been practically no call for such service before.

Replying to the last part of the second paragraph of your letter, you will note that in many counties in which a number of communities have offered protection to the school children and in some instances to the preschool children, large sections of the county have not as yet been reached through public clinics for diphtheria prevention. The Public Health News for July-August, 1926, contains some interesting data on the per cent of susceptibility to diphtheria found in a group of thirty communities in which this department worked a few years ago.

A list of cities, boroughs and townships in a number of counties of the State in which our records show that toxin-antitoxin and the Schick test have been offered at public clinics maintained by the local board of health or board of education or the two jointly.

Atlantic County

Atlantic City ?
 Hammonton ?
 Egg Harbor City (about to offer toxin-antitoxin)

Camden County

Camden City
 Pensauken Township
 Collingswood
 Clementon
 Delaware Township
 Gibbsboro
 Gloucester Township
 Haddonfield
 Haddon Heights
 Haddon Township
 Magnolia
 Total treated 3810, exclusive of Camden City.

Cape May County

Cape May City 146
 Ocean City ?

Gloucester County

Greenwich Township
 National Park
 Pitman
 Woodbury
 Woolwich Township
 Total treated 2680

Hunterdon County

Flemington
 Raritan Township
 High Bridge
 Total treated 1500

Mercer County

Diphtheria prevention work has been done in the public and parochial schools in

Trenton
 Lawrence Township
 Princeton Township
 Princeton Borough
 Hopewell Borough
 Pennington
 Hopewell Township
 Highstown
 Total treated 3088, exclusive of Trenton City

Middlesex County

New Brunswick
 Perth Amboy
 Metuchen
 Carteret
 Milltown and Woodbridge Township have made a public offer and will begin work in January.

Monmouth County

Boroughs or townships have conducted public clinics for administering toxin-antitoxin, usually in public schools, as follows:

Freehold
 Asbury Park
 Neptune Township
 Avon
 Monmouth Beach
 Bradley Beach
 Long Branch

Total treated 5400 to July, 1927

The following is a list of the places which are now giving the treatment and test, the total number of children not yet known:

Neptune City
 Rumson
 Shrewsbury Borough
 Middletown Township
 Red Bank
 Keyport
 Raritan Township
 Little Silver
 Highlands
 Shrewsbury Township

Ocean County

Nine townships or boroughs have offered toxin-antitoxin to school and preschool children as follows:

Beach Haven Borough
 Barnegat City
 Eagleswood Township
 Little Egg Harbor Township
 Pt. Pleasant Borough
 Pt. Pleasant Beach Borough
 Stafford Township
 Tuckerton Borough
 Union Township

Total persons who received tests or toxin-antitoxin treatments at clinics held in these places has been 1129.

Somerset County

Somerville
 Raritan Township
 Bridgewater Township
 Manville
 Bound Brook
 Peapack-Gladstone
 Total treated 4000

Union County

Plainfield
 Elizabeth
 Rahway
 Scotch Plains Township

Prepared in the Bureau of Local Health Administration, N. J. State Department of Health.

BOARD OF MEDICAL EXAMINERS

(Letter from the Secretary, Dr. Charles B. Kelley, December 30, 1927)

The following cases have been tried since our last report to you:

On October 3, Leroy Johnson, an unlicensed chiropractor of Elizabeth, N. J., was tried for practicing medicine without a license and a judgment entered for the penalty. He has appealed to the Supreme Court.

On October 7, Samuel Deivey, an itinerant medicine man, pleaded guilty, in the Mount Hol-

ly Court of Common Pleas, to a charge of practicing medicine without a license and paid the penalty.

On October 25, Antonio Sansone was tried in the First District Court of Newark, N. J., on a charge of practicing medicine without a license and a judgment was entered for the penalty.

On November 1, Isadore Kiesman and Albert Stehling, druggists of Hoboken, N. J., pleaded guilty to practicing medicine without a license and paid the penalty.

During November, Michael Letizia, a druggist of Paterson, N. J., paid the penalty for practicing medicine without a license.

During November, 1927, Dagmar S. Ackerman, an unlicensed chiropractor of Paterson, N. J., paid the penalty for practicing medicine without a license.

On December 6, Elva Jacobus was found guilty of practicing chiropody without a license.

On the same day, Jefferson B. Van Tine paid the penalty for practicing medicine without a license.

On December 6, Alfred E. Smith was found guilty in the First District Court of Newark, N. J., of practicing medicine without a license and was committed to jail for 30 days.

On December 13, Tomasso D'Alessio, of West New York, N. J., paid the penalty for practicing medicine without a license.

At the September meeting of the State Board of Medical Examiners of New Jersey, the license, to practice midwifery, of Anna G. Kereszi, of Trenton, N. J., was revoked on a charge of practicing criminal abortion.

Medical Book Reviews

(Royce Paddock, M. D., Department Director.)

SIXTY YEARS IN MEDICAL HARNESS: of the story of a long medical life, 1865-1925. Charles Beneulyn Johnson, M. D., New York, The Medical Life Press, 1926.

Dedicated to the "Family Doctor", this book stands first of a series of books on Medical History by the same publishers. It represents in a vivid human way the life of a practitioner who began his work in the days before bacteria were reckoned with, and before his state, Illinois, was provided with a medical practice act. From this beginning it leads most interestingly up to the stage of real public activity and, by the way, provides many stirring incidents and fresh views crowded into a busy life; he has looked around and here records his impressions of his teachers, colleagues, and patients in a way that only the family doctor could.

In the series of books following this, the names Sudhoff and Neuberger are prominent, and the scope covers the wide field of medical history. In this first volume the field is the prairie of Champaign County, Illinois, while the space of time covered gives a continuous picture of the development of present day medicine in this country.

PHYSICAL DIAGNOSIS. Richard C. Cabot. Ninth edition revised and enlarged, New York, 1927. William Wood and Co., p. 536; 6 plates; 279 figures; price \$5.

In a short preface, Dr. Cabot states that "the

most important additions are the reference numbers corresponding to the Gamble-Cabot Cardiac Diagnosis records, a set of phonographic records taken with the collaboration of the Western Electric Co. and the Columbia Phonograph Co., by Dr. Clarence J. Gamble and myself during 1926. These records illustrate normal heart sounds, accented and split heart sounds, the third heart sound, systolic, presystolic, mid-diastolic and early diastolic murmurs, auricular fibrillation, and bigeminal rhythm."

With this announcement as the main innovation, the Ninth Edition remains the same compact and now classical text covering the important methods of clinical and laboratory diagnosis to be applied by the practicing doctor.

MINERAL WATERS OF THE UNITED STATES AND AMERICAN SPAS. W. E. Fitch, M. D., Lea and Febiger, Philadelphia, 1927. P. 800, ill.

To direct attention to the many valuable domestic mineral springs and home spas which may replace the far-famed springs of Europe, is the purpose of this book. Much added value is lent by the 3 collaborators, so that the book discusses the medicinal classification of mineral waters, their ingredients and moderate radioactivity, their application, and a rather complete list of our springs with details of climates and waters. The chapters on hydrotherapy in its narrower sense of bath therapy and external application, are the most concise and practical portion of the book. Sections on the physiologic action of mineral waters and their application in disease leave the reader with the impression, which is frankly admitted, that our knowledge is very limited and our application empiric. This impression is made stronger by rather didactic statements not openly supported by any experimental data, and a tendency to shades of classification which retain the sound of an ancient tradition rather than in present problems.

Although it appears that no state is without some mineral spring or spa, New Jersey can claim but 2 of the 500 pages devoted to this part of the book. The accumulation of these data on our springs provides a ready reference to the subject, at the cost of a lot of work on the part of the collector, and should prove valuable and stimulating towards an increased use of this somewhat neglected art.

ALLERGY, ASTHMA, HAY FEVER, URTICARIA AND ALLIED MANIFESTATIONS OF REACTION. W. W. Duke, St. Louis, 1925. The C. V. Mosby Co., p. 339; 75 illustrations. Price \$5.50.

Books on the above subject are not yet common. The fact that the methods discussed are not more than few years old would tend to explain this lack. Since a fair assessment of their value must depend on the therapeutic test, much time must pass before it is established. Duke's book, then, represents one of the earliest attempts to gather the findings in one volume.

Judged as such, it is a profusely illustrated and very interesting work, including some really original investigations on physical allergy, and the evidence of a great deal of enthusiasm and hard work. The chapter on pollen and pollen testing is very complete, with its many illustrations of the plant causes. However, the findings of a pollen survey are somewhat limited in value by the limitations of microscopic recognition of a particular species. Whereas considerable prom-

innence is given to the investigations on physical allergy, asthma is hardly admitted to the dignity of a special clinical entity, being mentioned incidentally; on its clinical side being dismissed in about 1 page. Such definite limitations make us feel that while interesting and original, the book must be taken as a collection of preliminary observations in a new field rather than as a standard guide. The author puts forward claims for the short method of pollen injections for the prevention of hay fever. This method is very probably well worth trial.

Case Reports

REFLEX COUGH

Henry T. von Deesten, M. D., Hoboken, N. J.

Coughing is a reflex act and usually initiated by irritation of the sensory nerves in some portion of the mucous membrane of the respiratory tract. Although rare, cough may originate in cases outside of the air passages (reflex cough). This possibility must always be considered and the cause sought for in every case where the origin of this symptom is obscure. The presence of an undiagnosed reflex cough, together with a positive roentgenographic report of pulmonary tuberculosis, made without clinical or laboratory confirmation, might condemn a patient to prolonged unnecessary treatment with dire results to himself and his family.

The following report is to illustrate such a case of reflex cough: J. T., aged 37, Scotch electrician, consulted me for the relief of a cough, September 24, 1927.

Family history: Negative.

Personal history: At the age of 19 had an attack of pneumonia, from which he completely recovered. Until the onset of his present illness, he smoked 20 cigarettes a day; since then has gradually discontinued their use and for the last 2 weeks, ceased smoking entirely. His personal history was otherwise irrelevant.

Present history: On a certain day, in the first week of August, after taking an ocean swim, he was suddenly seized with a paroxysm of coughing. The cough was dry, hard, explosive and resembled whooping cough (without the whoop). Since then he has had many similar attacks with a tendency to increase in length and severity. In the intervals between paroxysms, a constant feeling of tickling in his throat was present. At night he noticed that resting on his left side increased the number of paroxysms. Loss of sleep caused a feeling of depression. His appetite became poor and his weight decreased 10 lb.; he feared tuberculosis.

Physical examination: Patient was a well nourished, robust individual with normal temperature, pulse and respiration. Examination of his nasopharynx, larynx and chest revealed no apparent cause for the cough. The blood pressure was 120/80; the pupillary and skin reflexes normal. The sputum was slight in amount, mucoid in character and stained smears showed no tubercle bacilli.

Examination of ears: The right external auditory canal and tympanic membrane were normal in appearance. On introduction of the speculum into the left external auditory meatus he immediately had a fit of coughing. Further examination revealed a plug of movable cerumen near

the end of the canal. Its proximal end was hard and irregular. The plug was easily extracted, without traumatism, by a pair of forceps. It was not necessary to syringe his ear. The underlying skin of the canal was reddened, inflamed and abraded in spots; the drum was deeply injected but normal in contour. Neither pain nor discomfort in this ear had ever been experienced by the patient. Immediately after the removal of the plug, he noticed a diminution of the disagreeable tickling sensation of his throat, and 24-36 hours subsequently, after several instillations of warmed castor oil, his coughing disappeared entirely. At his next visit, 3 days later, his external auditory canal and ear drum were normal.

Comment

Bathing loosened this plug of cerumen and caused it to act as a foreign body in the ear, with resultant irritation of the external auditory canal and excitation of the auricular branch of the vagus (Arnolds nerve), stimulating reflexly the cough center. The introduction of a speculum into the ear in certain patients will cause a paroxysm of coughing due to excitation of this same nerve. Many text books on medicine do not mention reflex cough in differential diagnosis. Some authors doubt its existence.

The course and result of treatment in the foregoing report illustrate a case of pure reflex cough, a condition well known to the otologist but apt to be forgotten by the practitioner, when a patient consults him for the relief of cough.

LYMPHOSARCOMA WITH ANEMIA OF PERNICIOUS TYPE

H. R. Livengood, M. D., Elizabeth, N. J.

The patient, H. C. H., a banker, aged 50, had typhoid fever in 1918, followed by a considerable worry over business matters through 1923-24. In February, 1925, a severe attack of lumbago appeared very suddenly and after a short remission there were definite signs of arthritis in the sacro-iliac joints, which condition was proved by roentgenograms. April 29, 1925, he was still suffering with considerable pain in the back, accompanied by dyspnea, rapid pulse with apex beat to right of the nipple line, and signs of effusion in the left plural cavity; a paracentesis releasing 82 oz. of a clear serous fluid which had a specific gravity of 1.020 a trace of nuclealbumin, endothelial cells 60%, polymorphonuclears 25%, mononuclears 15%, and no bacteria. At that time his blood examination showed: red cells 4,000,000; whites 6500; polymorphonuclears 69%; lymphocytes 25%; endothelial cells 6%; and hemoglobin 76%. Frequent urinary analyses were negative as to albumin, sugar and casts. There was at the time a small, painless swelling in the right parotid region.

A second aspiration, May 5, 1925, brought forth 88oz. clear straw colored fluid from the left plural cavity. Administration of digitalis was started at that time. On May 18, 8oz. more of fluid was withdrawn from the left side.

An x-ray examination of the chest at that time showed no enlarged lymph glands in the mediastinum. His blood count then showed an increasing anemia: red cells, 3,800,000; whites, 8600; hemoglobin 74%; and chemical analysis gave uric acid 2.5 mgm. per 100 c.c. with nonprotein nitrogen 40 mgm. per 100 c.c.

The patient was then seen in consultation by

Dr. Evan Evans, of New York City, who thought there was some dullness in the apices of both lungs and some enlargements in the hypochondriac and left iliac regions in addition to the parotid enlargement. The patient was sent to the General Memorial Hospital, in New York, for radium and x-ray treatment under the direction of Dr. William Stone and massive doses were administered over a considerable period of time. Aspiration of the left pleural cavity, repeated twice after the commencement of radium treatment, showed no more formation of fluid.

During 1926 the patient returned to business but did not look well and had lost considerable weight. In September 1927 it was necessary to give 2 blood transfusions, of 500 and 750 c.c. respectively; before transfusion blood count had shown: reds 1,600,000; whites 6,000; hemoglobin 30%; color index .94. For some time previous to this examination the patient had been on a liver diet with abundant supply of green vegetables. In November 1927 his blood count dropped to 1,500,000 reds and 4300 whites on the third of the month and to 1,230,000 reds and 1720 whites, with a hemoglobin of 18% on the eighteenth of the month. His temperature ranged during November from 101° to 104°, pulse from 100 to 130, respirations 20 to 30; and death occurred November 25, 1927.

Autopsy by Dr. Arthur Casilli disclosed: Heart enlarged, with fatty degeneration, distended right auricle, and 40 c.c. of fluid in the pericardium. Extensive atheroma of the abdominal aorta. Edematous lungs, with fluid in both pleural cavities but no enlargement of mediastinal or bronchial glands. Spleen enlarged to double normal size with a smooth capsule and a cut surface mushy. Suprarenals lemon yellow. Stomach greatly distended and filled with a dark, coffee-ground material. Large interstitial pancreatitis. Liver enlarged, congested, of nutmeg type. Gall-bladder distended contained 3 large stones. Bone marrow from tibia, dark red and edematous. All organs contained an excess of a peculiar lemon fat, such as is found in pernicious anemia.

Summary

The interesting features in this case appear to be: (1) Mode of onset. (2) Entire disappearance of traces of lymphosarcoma under treatment by x-ray and radium. (3) Appearance of an anemia, which resembled pernicious anemia but had not the usual features of Addison's disease. (4) The question whether massive doses of radium had anything to do with production of this anemia, either by destruction of the reticulo-endothelial system or direct alteration of the blood.

Herbert French says: "There are certain cases of very severe anemia which some would include under the head of pernicious anemia although the color index is persistently below 1. It is more useful from a clinical point of view to leave these cases unlabeled, or at any rate, not to call them pernicious anemia." It is certainly difficult at times for the clinician to make his diagnosis conform to that of the pathologist, and certain cases which begin as a severe grade of secondary anemia may later run to the true form of the Addisonian type; this is particularly true of old people. We have in aplastic anemia another form of severe, progressive anemia which is usually fatal, but which has a low color index and a state of the bone marrow entirely different from that of Addison's disease.

The Woman's Auxiliary

Since publication of our last report another county society has come into the fold with the organization of an auxiliary; which makes 17 county auxiliaries now organized. The county referred to is Warren, where a meeting was held January 10, at Newton, and the wives of members of the Medical Society were invited to meet with Dr. Reik for a discussion of auxiliary work. A tentative organization was formed but election of permanent officers was postponed until the April meeting; Mrs. L. H. Bloom undertaking, upon request of those present, to endeavor to secure a larger attendance at that time.

Middlesex and Sussex County Medical Societies have endorsed the proposition and it is expected that definite organization of auxiliaries in those counties will be effected shortly. Thus the work advances, slowly but surely.

From the Virginia Medical Monthly, January number, we copy the following very interesting item, out of which each of our county auxiliaries should be able to abstract some helpful hints:

A. M. A. Officers Coöperate with Auxiliary

At the American Medical Association meeting in Washington, last May, the House of Delegates authorized the Trustees to appoint a Liaison Committee to guide the Auxiliary in its policies. This appointment was not made until the meeting of the Board of Trustees in September. The Auxiliary has been greatly honored in having the Executive Board of the Board of Trustees appointed to direct its work. It is composed of the following gentlemen:

Dr. Edward Heckel, Ex-Officio Chairman, Pittsburgh, Pa.

Dr. A. R. Mitchell, Lincoln, Neb.

Dr. J. H. J. Upham, Columbus, Ohio.

Dr. J. H. Walsh, Chicago, Ill.

Dr. Olin West, Secretary and General Manager, Chicago, Ill.

Dr. Morris Fishbein, Editor, Chicago, Ill.

These men have given their approval and offered excellent suggestions, outlining plans for the Auxiliaries' work during the year. Some of these are:

To organize for the purpose of responding to any call from the medical profession and to do all the work assigned to it from time to time.

To promote closer social contact between the families of physicians.

To assist in lightening the burdens of humanity.

To help preserve the health of the people.

To outline Health Programs approved by the Liaison Committee to be presented before other organizations.

To recommend to all clubs that they place capable physicians' wives in charge of Club Health Departments, in order to secure authoritative programs.

To secure, if possible, moving pictures to illustrate the importance of the annual physical examinations by the family physician. Each member of every household, servants included, should be examined.

To assist in providing Health Talks over the radio by prominent physicians and health officers. These speakers should be appointed by the County Medical Society.

To continue our efforts to place Hygeia in every home, as it is the leading health magazine of

the United States and is published by the American Medical Association.

To appeal especially to physicians to aid in the Hygeia campaign, as the commissions received enable the Auxiliaries to extend their activities.

To recommend to Auxiliaries that they give benefit entertainments to create a fund for Hygeia, which will be used as gifts of subscriptions to schools, legislators, churches and libraries.

The Members of the Woman's Auxiliaries to the American Medical Association are those who have paid their annual dues to the National organization through their County and State Auxiliary.

Where there is a County Medical Society there should be an Auxiliary. It has been uniformly noted that there is more interest and enthusiasm, and a greater spirit of comradeship among the members of the County Medical Society if there is an active Auxiliary working in the community.

It is the earnest endeavor of the Auxiliary to bring its work to the attention of all who are interested in the welfare of our people.

Every physician's wife should feel it a privilege as well as her duty to promote dependable health education, not leaving it in the hands of various cults.

She can aid materially in the Auxiliary's effort to impress upon all club members a proper conception of the real mission of Organized Medicine, especially in its crusade of Preventive Medicine.

Reports from County Auxiliaries

Atlantic County

Mrs. Lawrence A. Wilson, Secretary.

The Women's Auxiliary of the Atlantic City Medical Society met on Friday evening in the Blue Room of the Chalfonte Hotel. Mrs. John F. Massey was introduced as the new president by the past president, Mrs. Charles B. Kaighn, and a reception was tendered the retiring officers, Mrs. Kaighn, Mrs. William Martin, Mrs. Joseph Poland, Mrs. E. H. Harvey and Mrs. Edward Guion.

The new officers are: President, Mrs. John F. Massey; First Vice-President, Mrs. William Martin; Second Vice-President, Mrs. William J. Carrington; Recording Secretary, Mrs. Lawrence A. Wilson; Corresponding Secretary, Mrs. Charles B. Kaighn, and Treasurer, Mrs. Robert A. Bradley.

Mrs. Samuel Barbash, Chairman of the Entertainment Committee, was in charge of the program, which consisted of several selections by members of the Junior Crescendo Club.

Miss Alice Burch sang several soprano solos, accompanied by Miss Ethel Dobson; Miss Betty Poland played a cello solo, "Berceuse", and Miss Miriam E. Barbash played "The Swan". Miss Jane Heller was the accompanist.

Mrs. Massey read a notice from the state auxiliary president, Mrs. A. Haines Lippincott, telling of the mid-year luncheon and meeting of the executive board of the Women's Auxiliary of the New Jersey Medical Society to be held in the Carteret Club, Trenton, on January 30. Mrs. Massey and Mrs. Samuel Barbash, organizing chairmen for the state, will attend this meeting.

Those present were: Mrs. William Martin, Mrs. Maurice Chesler, Mrs. Edwin H. Harvey, Mrs. Joseph Poland, Miss Betty Anne Poland, Miss Jane Heller, Mrs. Benjamin Rosenblatt, Mrs. Sidney Rosenblatt, Mrs. Charles B. Kaighn, Mrs. Bernard Crane, Mrs. John F. Massey, Mrs. David

E. Allman, Mrs. Robert A. Bradley, Mrs. Leland Madden, Mrs. Samuel Barbash, Mrs. William Burch, Mrs. Lawrence A. Wilson, Mrs. Edward Guion and Mrs. W. Blair Stewart.

Bergen County

Reported by Mrs. Valentine Ruch.

The regular monthly meeting of the Woman's Auxiliary of Bergen County was held at the Nurses' Home of the Hackensack Hospital on Tuesday afternoon, December 13, 1927.

After a short business session a bridge party was held, prizes being awarded, and dainty refreshments served by the Hospitality Committee.

Camden County

(Owing to illness, Mrs. Westcott's report from Camden County, of October and November meetings has only just been received.)

The regular meeting of the Woman's Auxiliary to the Camden County Medical Society was held October 11, at the Camden City Dispensary with Mrs. Edward Pechin, president, in the chair.

Dr. E. J. G. Beardsley of Jefferson Hospital gave a very interesting address on the subject of Periodic Health Examinations.

Following this talk the members were entertained at dinner by the County Medical Society. Considering inclement weather a fair number of members attended.

On November 7, a tea was given by the Woman's Auxiliary at the Woman's Club, Camden. Mrs. E. C. Taneyhill, of New York City, was present as a guest. Mrs. Taneyhill spoke in explanation of the "Public Educational Program" of the New Jersey State Medical Society and of the part that women's organizations of all kinds can play in the promotion of better community health. The meeting was very well attended.

Large majority of the eligibles have been enrolled in the Auxiliary.

JANUARY MEETING

Reported by Mrs. R. G. Bushey.

The January meeting of the Woman's Auxiliary was held on Tuesday evening, January 10, at the Camden City Dispensary.

Dr. Henry O. Reik, Editor of the New Jersey State Medical Journal, gave a brief outline of the work being done in other counties.

Mrs. A. J. Casselman, a member of the auxiliary, gave a splendid review of the first four chapters of the "Microbe Hunters".

There is a card party in February, a committee for its arrangement having been appointed.

Hudson County

Reported by Mrs. Harry J. Perlberg.

The Woman's Auxiliary of Hudson County held a meeting on Tuesday, December 6, at the home of Mrs. Peter Maras, of Jersey City. The president, Mrs. William Freile, conducted the meeting.

Miss Mary Dickerman, Superintendent of Nurses of the Metropolitan District of Northern New Jersey, gave a talk on the progress of similar auxiliaries in the west.

After routine business a social hour was enjoyed by the members.

In future, meetings will be held at the Car-

teret Club on the third Friday of the month, the social hour following business to become an established feature.

Ocean County

Mrs. Adolph Towbin, Secretary.

First meeting of the Woman's Auxiliary to the Ocean County Medical Society was held November 30, 1927, at the Laurel in the Pines Hotel, Lakewood, with the following present: Mrs. F. Bunnell, Mrs. E. S. Carrigan, Mrs. F. Denniston, Mrs. Harold Disbrow, Mrs. V. M. Disbrow, Mrs. H. H. Davis, Mrs. A. Goldstein, Mrs. E. Herbener, Mrs. R. R. Jones, Mrs. Stewart Lewis, Mrs. T. Thompson, and Mrs. A. Towbin.

Dr. Reik, of Atlantic City, delivered a very interesting talk and following that gave instructions for organization.

Mrs. Bunnell was duly elected President; Mrs. Herbener and Mrs. Harold Disbrow, Vice-Presidents; Mrs. Denniston, Treasurer, and Mrs. Towbin, Secretary.

It was decided to have the next meeting January 11, 1928, at the home of Mrs. Harold Disbrow, 422 3rd Street, Lakewood.

List of members: Mrs. Bunnell, Barnegat Bay, N. J.; Mrs. E. S. Carrigan, 405 River Avenue, Point Pleasant, N. J.; Mrs. F. Denniston, Point Pleasant, N. J.; Mrs. Harold Disbrow, 422 3rd Avenue, Lakewood, N. J.; Mrs. V. M. Disbrow, 315 Madison Avenue, Lakewood, N. J.; Mrs. H. H. Davis, 802 N. Main Street, Toms River, N. J.; Mrs. E. Herbener, 423 3rd Avenue, Lakewood, N. J.; Mrs. R. R. Jones, 200 Washington Street, Toms River, N. J.; Mrs. Stewart Lewis, Pine Tree Inn, Lakehurst, N. J.; Mrs. A. Goldstein, 404 Madison Avenue, Lakewood, N. J.; Mrs. T. Thompson, 308 Monmouth Avenue, Lakewood, N. J., and Mrs. A. Towbin, 326 3rd Street, Lakewood, N. J.

Passaic County

Reported by Mrs. William A. Dwyer.

The Woman's Auxiliary to the Passaic County Medical Society held its regular meeting in the Health Center Building, Paterson, January 12, 1928. Mrs. G. E. Tuers presided.

A paper on the activities of auxiliaries in various part of the country was read by Mrs. Elias Marsh. It was very inspiring to learn of the objectives accomplished and the progress made by these organizations.

Mrs. Tuers introduced Dr. Grace Blauvelt, an intern at the Paterson General Hospital, and the first woman to serve as such in that institution. Dr. Blauvelt spoke on "Women in Medicine".

After the meeting adjourned some of the members attended the Medical Society lecture on "Orthopedic Examination, Care and Treatment of Early Childhood", by Dr. W. L. Sneed; others enjoyed a game of bridge.

At the December meeting the following officers were elected: Mrs. G. E. Tuers, President; Mrs. A. M. Schultz, First Vice-President; Mrs. J. P. Morrell, Second Vice-President; Mrs. William A. Dwyer, Secretary, and Mrs. A. Shulman, Treasurer.

Mrs. Tuers appointed the following committees: Social—Madames Schultz, Walton, Shapiro, and Lee. Educational—Madames Hagen, Morrell, and Tuers. Public Relations—Madames Marsh and McBride. Membership—Madames Ryan, Mitchell, and Cogan. Courtesy—Mrs. Dwyer.

Mrs. E. C. Taneyhill, Assistant Educational Secretary of the Medical Society of New Jersey, addressed the meeting.

Union County

Reported by Mrs. H. V. Hubbard.

A meeting of the Woman's Auxiliary of the Union County Medical Society was held in the Nurses' Home of the Elizabeth General Hospital, on Wednesday evening, January 11, 1928, while the County Society met in the Hospital.

Mrs. F. Kinch, of Westfield, the newly elected president, officiated. Fourteen members responded when the roll was called, and five new members joined: Mrs. J. E. Runnels, Mrs. R. T. Munger, Mrs. E. P. Weigel, all of Plainfield; Mrs. M. H. Hallock of Berkely Heights and Mrs. J. D. Tidaback of Summit. Making about 52 paid up members on our roll out of a possible 160.

Mrs. Kinch opened the meeting with a few well chosen words of welcome. The treasurer's report showed a balance of \$4.41 with no immediate expenses in sight. It was voted that hereafter we have a social meeting alternate with one devoted to business and a paper. Mrs. G. L. Orton was appointed chairman of a committee in charge of the social program for our next meeting. Mrs. Orton reported that Dr. and Mrs. Elton Lance, of Rahway, had a young son born within the last 24 hours. After other routine business was finished Mrs. Kinch introduced the speaker of the evening, Mr. C. K. Blanchard, Assistant Epidemiologist of the State Board of Health, who spoke on the state campaign against diphtheria. This was followed by a period for questions, which proved most interesting.

The meeting adjourned to meet again at the time and place of the next meeting of the Union County Medical Society.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M. D., Reporter

The regular monthly meeting of the Atlantic County Medical Society was called to order by the President, Dr. William C. Wescott, on Friday evening, January 13, 1928, at 8:45 o'clock, at the Hotel Chalfonte.

The minutes of the last meeting were read. Dr. Samuel Stern moved that the minutes be corrected to read "that the controversy with the Knickerbocker Adjustment Service be referred to the State Society Welfare Committee". Motion was carried.

Dr. Joseph H. Marcus, secretary, read a letter from Dr. Owen West of the A. M. A. acknowledging the letter of invitation from the Atlantic County Medical Society to the American Medical Association to meet in Atlantic City in 1929.

A letter was read from Dr. Henry O. Reik asking that a motion be presented to the Society that the Atlantic County Medical Society endorse the state wide campaign for diphtheria immunization. It was moved, seconded and carried.

A letter of resignation from Dr. Wm. O. Rupp was read and accepted.

Dr. W. B. Stewart, reporting for the Public Health and Legislation Committee, stated that

Dr. Henry O. Reik had arranged with Station WPG to broadcast health talks each Friday night at 7.45.

Dr. Wm. E. Darnall, reporting for the Library Committee, announced that a branch Medical Library has been established in the Atlantic City Hospital, where a librarian is in charge. This library is complete in every detail and the librarian will look up complete references on any subject that any physician may request, and that any books that are not in the library will be gladly procured. All physicians are urged to take advantage of this service.

The applications of Drs. Chas. Hyman, M.D., for active member and Manuel J. Malloy, D. D. S., as associate member, were approved by the Board of Censors; their election followed.

Application for membership by Dr. L. M. Walker was referred to the Board of Censors.

Dr. Walt P. Conaway moved that the Board of Censors investigate the alleged unethical conduct of one of the members of this society and report back to the society at the next meeting.

The President announced the new Committee on Public Health and Legislation for the year 1928, which is to be made up of D. W. B. Stewart, Chairman, and Drs. E. H. Harvey and Robt. M. Grier.

Dr. Wm. E. Darnell was re-appointed as the Library Committee.

Dr. Joseph Collins, of New York, who is the author of the following books: "Taking the Literary Pulse," "The Doctor Looks at Literature," "The Doctor Looks at Life and Love," etc., read a paper on "The Progress of the Neurologist."

Dr. Collins in an essay, which demonstrated that he is a master in the art of letters, traced the progress of the neurologist from the time of Galen through the period of Vessalius, the first really scientific neurologist, to the period of Romberg and Charcot. Romberg wrote the first neurology and Charlot established the first neurologic clinic. Then Mesmer first treated patients by suggestion, following which, Freud brought into being psycho-analysis, by which he brings the unconscious thought into the conscious.

In the early eighties there was no neurology taught. It was then that Erb brought neurology to the fore, when he demonstrated that syphilis of the nervous system is a large part of neurology.

Dr. Collin's paper was a rare literary treat and was greatly enjoyed.

Dr. Bernard Sachs, of New York, opened the discussion. He stated in part that the early neurologist felt that he must first settle the questions of organic nervous diseases before he could attempt to fathom the functional nervous diseases. Psycho-analysis has revealed the technic with which to analyze mental diseases. To talk about the subconscious is dangerous to laymen, who need not be made conscious of such thought, which goes to make hypochondriasis. It is all right to have these studies, but clinical application of them is a matter for serious consideration.

General Staff of Atlantic City Hospital

Joseph H. Marcus, M. D., Secretary.

The monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium, Friday, January 20, Dr. William J. C. Carrington presiding.

The scientific program was presented as follows: Report of Surgical Service, Dr. David B.

Allman. Case reports by Drs. Harr Walter T. Tice, Alfred E. Whitehouse, reports of Gynecologic Service, Dr. Walt way.

Dr. David B. Allman, Chief of Surgery, reported his service for August, September and October, 1927, which embodied 60 cases. Of this total, 162 (45%) were closed; approximately 150 (37½%) were open cases. The number of hospital days for patients totaled 3727, maintaining an average of 24 patients per day.

The more important conditions subject to surgery were: appendicitis 26 cases; fractured skulls 21; fractured femurs 10. The so-called "head cases" totaled 41 and included a patient with severe concussion, either associated with fracture or existing as an entity; 13 cases of demonstrable fracture as demonstrated by x-rays and 5 had such extensive injuries that the patients died before operation could be instituted.

Dr. Allman feels that there is neither any use in hurrying a seriously injured patient, who is on the verge of death, to examination by the x-rays in order to ascertain the exact location of the fracture, nor any necessity of rushing this patient to the operating room when there is total absence of hope in surgical procedure. Of the 5 skull fracture patients that died, all were in the hospital less than 11 hours each.

This service is inclined to be rather conservative in the treatment of head injuries. Not for the sake of statistics, I assure you, because, unless they are prepared in an unscrupulous manner, the best man is likely to have the worst statistics, and while I had no postoperative deaths from fractured skulls this year, I remember distinctly that I had several last year, and the "statistics" were not nearly so good. That has something to do with the fact that I said little about head cases last year, and much this year.

As we all know a fracture of the skull per se is probably the least offensive of all fractures. It is the nature and extent of the intra-cranial damage that makes the case serious and when speaking of the serious head cases it would probably be better to speak of very severe concussion with an associated linear fracture or a traumatic cerebral hemorrhage with a fracture—because unless the fracture is depressed, it is the concussion or the hemorrhage that demands attention rather than the fracture.

We feel that only the severe depressed fractures demand immediate surgical intervention; all others should be treated for the attendant shock, and while being treated an effort should be made by all laboratory means at our command to ascertain the true nature of the intra-cranial injury.

It is exceedingly difficult to convey to another physician just why the surgeon feels that this case should be operated upon and the other should not. Surgical conditions are not like this. For example, the severe abdominal pain, with rapid pulse and high temperature is nearly always benefited by an exploratory laparotomy. Not so with head cases. The temperature is of little value, except to help one know that his patient has reacted from shock, and there are other more reliable means of ascertaining this. The pulse gives more information to the surgeon's fingers than any report the nurse could possibly give as to its rate, quality or rhythm. The breathing of the patient and his very appearance help the subconscious mind of the surgeon to determine just what course to pursue in

a particular case. The medical man, the assistant and the residents frequently take issue—probably in their own minds only—with the judgment of the surgeon, only to have their suspicion confirmed when there is no satisfactory answer forthcoming as to why he operated or why he does not operate. And in behalf of my colleagues on the Surgical Staff I can assure you that it is not our wish to evade your questions or give you short answers, but it is that intangible something that cannot be explained. Nor do the surgeons always agree, but the difference of opinion is that honest difference, based on their past experiences, that have probably also been somewhat different.

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The symptomatology, coupled with the patient's age, syphilis, ignorance and filth, provoked discussions on the etiologic factors involving gangrene of scrotum and penis as related to this particular type of case.

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Dr. Henry O. Reik had arranged with Station WPG to broadcast health talks each Friday night at 7.45.

Dr. Wm. E. Darnall, reporting for the Library Committee, announced that a branch Medical Library has been established in the Atlantic City Hospital, where a librarian is in charge. This library is complete in every detail and the librarian will look up complete references on any subject that any physician may request, and that any books that are not in the library will be gladly procured. All physicians are urged to take advantage of this service.

The applications of Drs. Chas. Hyman, M.D., for active member and Manuel J. Malloy, D. D. S., as associate member, were approved by the Board of Censors; their election followed.

Application for membership by Dr. L. M. Walker was referred to the Board of Censors.

Dr. Walt P. Conaway moved that the Board of Censors investigate the alleged unethical conduct of one of the members of this society and report back to the society at the next meeting.

The President announced the new Committee on Public Health and Legislation for the year 1928, which is to be made up of D. W. B. Stewart, Chairman, and Drs. E. H. Harvey and Robt. M. Grier.

Dr. Wm. E. Darnell was re-appointed as the Library Committee.

Dr. Joseph Collins, of New York, who is the author of the following books: "Taking the Literary Pulse," "The Doctor Looks at Literature," "The Doctor Looks at Life and Love," etc., read a paper on "The Progress of the Neurologist."

Dr. Collins in an essay, which demonstrated that he is a master in the art of letters, traced the progress of the neurologist from the time of Galen through the period of Vessalius, the first really scientific neurologist, to the period of Romberg and Charcot. Romberg wrote the first neurology and Charlot established the first neurologic clinic. Then Mesmer first treated patients by suggestion, following which, Freud brought into being psycho-analysis, by which he brings the unconscious thought into the conscious.

In the early eighties there was no neurology taught. It was then that Erb brought neurology to the fore, when he demonstrated that syphilis of the nervous system is a large part of neurology.

Dr. Collin's paper was a rare literary treat and was greatly enjoyed.

Dr. Bernard Sachs, of New York, opened the discussion. He stated in part that the early neurologist felt that he must first settle the questions of organic nervous diseases before he could attempt to fathom the functional nervous diseases. Psycho-analysis has revealed the technique with which to analyze mental diseases. To talk about the subconscious is dangerous to laymen, who need not be made conscious of such thought, which goes to make hypochondriasis. It is all right to have these studies, but clinical application of them is a matter for serious consideration.

General Staff of Atlantic City Hospital

Joseph H. Marcus, M. D., Secretary.

The monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium, Friday, January 20, Dr. William J. C. Carrington presiding.

The scientific program was presented as follows: Report of Surgical Service, Dr. David B.

Allman. Case reports by Drs. Harry Subin, Walter T. Tice, Alfred E. Whitehouse. Reports of Gynecologic Service, Dr. Walt T. Conaway.

Dr. David B. Allman, Chief of Surgical Service, reported his service for August, September and October, 1927, which embodied over 400 cases. Of this total, 162 (45%) were operated on; approximately 150 (37½%) were accident cases. The number of hospital days for all patients totaled 3727, maintaining an average of 40 patients per day.

The more important conditions subjected to surgery were: appendicitis 26 cases; fractured skulls 21; fractured femurs 10. The so-called "head cases" totaled 41 and included a type of injury with severe concussion, either associated with fracture or existing as an entity; 12 had demonstrable fracture as demonstrated by x-rays and 5 had such extensive injuries that the patients died before operation could be instituted.

Dr. Allman feels that there is neither any use in hurrying a seriously injured patient, who is on the verge of death, to examination by the x-rays in order to ascertain the exact location of the fracture, nor any necessity of rushing this patient to the operating room when there is total absence of hope in surgical procedure. Of the 5 skull fracture patients that died, all were in the hospital less than 11 hours each.

This service is inclined to be rather conservative in the treatment of head injuries. Not for the sake of statistics, I assure you, because, unless they are prepared in an unscrupulous manner, the best man is likely to have the worst statistics, and while I had no postoperative deaths from fractured skulls this year, I remember distinctly that I had several last year, and the "statistics" were not nearly so good. That has something to do with the fact that I said little about head cases last year, and much this year.

As we all know a fracture of the skull *per se* is probably the least offensive of all fractures. It is the nature and extent of the intra-cranial damage that makes the case serious and when speaking of the serious head cases it would probably be better to speak of very severe concussion with an associated linear fracture or a traumatic cerebral hemorrhage with a fracture—because unless the fracture is depressed, it is the concussion or the hemorrhage that demands attention rather than the fracture.

We feel that only the severe depressed fractures demand *immediate* surgical intervention; all others should be treated for the attendant shock, and while being treated an effort should be made by all laboratory means at our command to ascertain the true nature of the intra-cranial injury.

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(5) That in which the gangrene is caused by injury of trophic nerves. The first cause considered as a definite disease and pertaining most directly to the case I have cited. The other causes are considered under wounds, and trauma.

Acute fulminating gangrene of the scrotum and penis is, according to Campbell, a disease characterized by an abrupt onset, a rapidly ensuing inflammation with marked edema, and subsequent necrosis of the superficial tissue of the genitals.

A. D. Whiting, in the *Annals of Surgery*, 1905, regards the etiologic factors as; first, related to the laxity of cellular tissue which permits of marked infiltration; second, looseness of the skin which diminishes resistance to infection.

Many observers believe the condition to be identical with erysipelas, as clinically or pathologically it appears as a cellulitis; and the onset, manner of extension, and the red, painful edematous nature of the lesion are characteristic of such a type of infection. Does it not seem reasonable to consider these cases as intimately allied to erysipelas if not typifying the condition itself, the presence of a hemolytic streptococcus being frequently present and of significance?

After 2 or 3 days of edema, the shiny redness becomes dull, exudation commences especially in the dependent portions and the greenish hue of gangrene becomes apparent. Our case showed gangrene with slough involving the entire external genitalia and lower one-quarter of the abdominal wall.

Case 2. The second case of complete gangrene of external genitalia departs somewhat from the etiologic characters of the first and brings up for discussion the rarely seen, yet definitely recognizable clinical entity—ulcerated and gangrenous balano-posthitis.

R. B., colored, age 33, appeared before Whitehouse in the dispensary with the following history: About a week ago, the patient had noticed a sore on the penis a week after having had intercourse. The sore became ulcerated. The ulceration rapidly spread and Whitehouse noted that the patient had a very long prepuce and was informed by patient that it had never been kept clean. This fact presumes at once that a varied bacterial flora was constantly present and very likely included a spirochete in association with a fusiform bacillus. The penis and scrotum then began to swell rapidly and at this time the patient applied to the dispensary for aid. Examination of genitals revealed a large ulcerating necrotic mass in region of prepuce. The remainder of the penis and scrotum were swollen out of all proportion to the normal and exhibited areas of gangrene throughout. The pus liberated in this case was just as profuse but of a much more sickening odor than in the first case.

William M. Donovan, of the University of Wisconsin, brings out the rarity of a fourth venereal disease not often seen and less often diagnosed—ulcerative and gangrenous balano-posthitis. He defines this as an acute inflammatory disease of the glans penis and opposed surface of the prepuce, characterized directly by ulceration and at times gangrene, accompanied by a copious flow of strongly odorous pus, and caused by a spirochete associated with a fusiform bacillus. Ulcerative and gangrenous balano-posthitis had been noted in cases of balanitis before the work of Battaille and Budal in 1889-1891, but was not considered to constitute a disease entity as now thought. This patient, whose symptoms have been discussed and whose treatment was also

a complete emasculation, was discharged on his own request almost completely healed.

The last case for presentation involves a discussion of the infrequent yet important problem of gangrene of the testicle.

Torsion of the spermatic cord is commonly the cause. Scudder collected 31 cases of this type, 75% of which occurred in patients under 23 yr. of age. Etiology: The only predisposing factors are malposition of testicle or long mesochoordium. In the majority of cases the right side is involved and the condition is produced without any definite traumatism other than a quick motion or sudden strain.

The symptoms are similar to those of strangulated hernia, from which condition it can be differentiated by the absence of evidence of intestinal obstruction, exquisite tenderness of the strangulated cord and testes, and the absence of expansile impulse in the swelling upon coughing.

Case 3. The third case concerns itself with infection of the epididymus producing a suppurative orchitis in a male, 71 yr. of age. A right orchidectomy was performed before any evidence of gangrene was visible. This case was referred to the surgical ward rather quickly because of having been under the care of a genitourinary specialist. I mention this because of the fact that literature is abundant on mechanical obstruction producing strangulation and gangrene of the testes, but is scant on the far more prevalent, though equally destructive condition, and one just as conducive to the production of gangrene, namely infection.

Dr. Alfred E. Whitehouse, resident physician, presented a case of "Idiopathic Suppurative Peritonitis" in which the primary source of infection could not be traced. This patient was a laborer, male, age 52, who presented the essential features of sudden and severe attacks of pain in the right lower quadrant. Three days following, the patient vomited, the abdominal wall becoming greatly distended and very tender. On admission, the temperature was 98.3°, pulse 100, respiration 30. The consequential features of the blood examination showed 16,650 leukocytes with 97% polymorphonuclears and the urine 10 mgm. of albumin. Operation revealed a large amount of pus; appendix was removed and presented no gross picture of infection. Another incision higher up was made in order to inspect the duodenum, stomach, gall-bladder and adjacent viscera but failed to reveal any pathology. Patient was discharged one month later in good condition.

Dr. Walter E. Tice, resident physician, reported a case of "Fibroma of the Ovary with Complete Prolapse of the Uterus", from the service of Dr. Walt P. Conaway.

Mrs. F. O., white, age 59 years, housewife by occupation, was admitted to the hospital on September 2, 1927, with the complaint of "swelling of the abdomen". The family history has no bearing on the case. Her general health was good until the present illness. She had the usual diseases of childhood.

Gynecologic history—Her menses began at the age of 13 years, were of the 28 day type, lasted for 3 to 4 days, flow moderate and not associated with pain. Her last period was 5 years ago. She has 3 children living and well. The first 2 labors were long and difficult and were instrumental. She was badly lacerated at this time. She had had no headaches or backaches but her appetite has been poor and she has been constipated. She has had no frequency or burn-

ing on urination, but at times has noted that her urine was red.

The onset of the present condition is indefinite. She has had complete prolapse of the uterus for 3 years and according to her statement has been comfortable with it. During the last few months she noted that she was getting weaker and had lost some weight. A week before admission she noted that her abdomen was swollen. She could not eat, had severe pains in abdomen, and after a few days called a doctor who sent her to the hospital.

The patient is an emaciated, pale adult female, of low mentality with slight dyspnea and no cyanosis. Her pulse was 100 and of poor volume, temperature 99° and respiration 30. The head, eyes, ears, nose, throat and lungs showed no changes. The heart was not enlarged but was fast and the sounds were weak. The abdomen was ovoid in shape, quite tense and presented evidence of a large amount of fluid. Several hard tumor masses were palpable which resembled a fetal head. The liver and spleen were not palpable. Vaginal examination revealed complete prolapse of the uterus, with moderate amount of ulceration. Laboratory reports showed a mild secondary anemia. The urine contained 250 mgm. of albumen, no casts but numerous red blood cells. The x-ray failed to give any information as to the tumor. The patient's condition remained the same. Four days later 6 liters of fluid were removed from the abdominal cavity. Her condition became worse and she ceased to breathe 4 days later.

Postmortem examination was very interesting. The thorax showed numerous dense pleural adhesions, several calcareous lymph nodes, and a heart that was practically normal. The abdominal cavity contained much fluid, and the lower half and pelvis was filled with a large, irregular tumor mass which was partly cystic and partly of firm consistency. The tumor mass was attached by a small pedicle to the right side of the pelvis at the normal point of attachment of the right ovary. There were numerous dense adhesions between the tumor mass and the intestines. The liver, spleen and pancreas were normal. The gall-bladder was dilated and contained one large mulberry stone. The right kidney showed numerous small tubercles. Sections confirmed the diagnosis.

Anatomic diagnosis: Complete prolapse of the uterus, ascites, fibroma of the right ovary, cholelithiasis, and renal tuberculosis.

Dr. A. E. Whitehouse, resident physician, reported a case of "Foreign Body in the Uterus with a Puncture Wound Extending Through the Posterior Lip and Uterine Cavity".

Mrs. F. B., age 32, negress, laundress: Measles and chicken-pox at 17 and malaria at 18. Menstruation began at 14, was regular 21 day type, duration 4 days, flow copious and no dysmenorrhea. Has been married 12 years and has had 3 children, 1 of which is living.

Four years ago, while working, patient was taken with a chill and severe pain in the abdomen. She was taken to a doctor's office where a vaginal examination was made. She was relieved at this time but since then has suffered intermittent attacks of pain. Has had irregular bleeding, a vaginal discharge and difficulty in voiding. On August 8, the day of her admission, the patient was taken with a sudden attack of severe pain in the abdomen and was brought to the hospital dispensary.

On examination there the head, neck and

thorax were negative. There were no palpable masses in the abdomen but there was considerable tenderness over the whole lower portion. The whole abdomen was rigid and this was especially marked in the lower part.

On vaginal examination a hard cylindrical mass was felt protruding from the posterior lip of the cervix for a distance of about 1 in. With a speculum, this was shown to be a wooden stick which was penetrating the posterior wall of the cervix. It was not in the external os. Its direction was upward and forward. The stick was removed with a pair of forceps and proved to be about 6 in. long.

The patient was sent to the ward and subsequently operated upon. At the time of operation the cervix was found to be eroded and lacerated. There was a puncture wound about 1 in. long through the posterior lip and extending into the uterine cavity. A posterior colpotomy was not done for fear of creating a fecal fistula, especially since a fluctuating mass could not be diagnosed in the cul-de-sac while the patient was under anesthesia. On opening the abdomen the intestines and mesentery were found thickly matted to the fundus of the uterus. About 6 oz. of foul smelling pus was evacuated from the right broad ligament and the cul-de-sac. Several pus pockets were found in the left groin. When the intestinal and mesenteric adhesions were released an opening was found in the fundus showing that the stick had evidently passed entirely through the uterus into the abdominal cavity. The pus present was evacuated and 2 cigarette drains were inserted. The wound was closed in the usual manner.

The patient stood the anesthetic well and left the operating room in good condition. She made a rather uneventful recovery and was discharged in good condition on September 7, 28 days after admission.

Dr. Walt P. Conaway, Chief of Gynecologic Service, reported his service for the months of August, September and October, 1927. Dr. Conaway also related some of the advantages and disadvantages in the use of radium in the cure of gynecologic cases afflicted with malignant disease. His report follows:

From August 1 to December 1, 1927, there were admitted to the Gynecologic Ward of the Atlantic City Hospital 81 cases. Of these, 30 were subjected to major and 46 to minor operations. These, with a few exceptions, were all of the usual gynecologic type, and an itemized list of the operative work would be superfluous at this time. Two were transferred to the Medical Service; 1 was discharged as inoperable; 2 refused operation. Of the 81 admissions, there were 5 deaths, 2 of which were postoperative. Among the deaths, 1 was due to advanced carcinoma, operated on during a previous service; 1 was an elderly woman with complete uterine prolapse, ovarian cyst, uterine fibroid, chronic cirrhosis of the liver, and several quarts of ascitic fluid. Her general condition was so poor on admission that she was considered hopeless and except for the withdrawal of the free fluid in the abdomen under cocain anesthesia, no operative work was attempted. Another case, a young woman admitted with the diagnosis of suspected pregnancy, 5 months, was operated on after the diagnosis had been changed to an ovarian cyst, right side. She was not pregnant and had only a small ovarian cyst in the right side of the pelvis. She was one of those cases of endocrine disturbance, amenorrhoea and pseudocyesis,

which should not have been operated on. The fourth case was that of a white woman, age 38, admitted to the medical service with a history of severe pain 24 hours previously, followed by weak and fainting attacks and some dyspnea. The next day she was transferred to our service for immediate operation with a diagnosis of ruptured ectopic gestation. There was a ruptured tubal pregnancy at the uterotubal junction, considerable free blood in the abdomen, and the hemorrhage from the site of the rupture not controlled. Her general condition at the time of operation was very poor and she was given 400 c.c. of glucose solution intravenously in the operating room. She reacted fairly well for the first 12 hr. but another intravenous injection of glucose was given the second day with little or no favorable results. She died 24 hr. after operation and a postmortem inspection of the abdominal contents through the incision did not reveal any secondary hemorrhage to account for death.

I have noticed that ectopic gestation at the uterotubal junction is much more serious than if the rupture occurred in any other portion of the tube. Professor Henry Formad, Pathologist at the University of Pennsylvania, about 30 years ago, said that it had been his observation that cases of tubal pregnancy at the uterotubal junction nearly always came to his laboratory for operation, while the surgeon could cure ectopic gestation which had occurred in other parts of the tube. The few cases of ruptured ectopic which we have lost in the past 10 years have all been of just this type.

Another unusual case was that of a colored woman, 53 years of age, admitted August 22, with a diagnosis of chronic salpingitis and a hard tumor about the size of a goose-egg on the right side of the uterus, either a pedunculated fibroid or a thick walled tumor of the right ovary. Operaton revealed chronic salpingitis, cystic ovary on the left side, chronic appendicitis, and a large calcified ovary on the right side. Both tubes and ovaries and the appendix were removed. The history of this case was that she had suffered with pain in the right side for about 8 yr. and had, of course, taken all kinds of medical treatments, including the Alpine lamp which was promised to absorb the right sided inflammation in about 12 treatments. She made an uneventful recovery. The tumor is brought before you for inspection on account of its comparative rarity.

A young colored woman was operated on for double pyosalpinx. She made an uneventful recovery in about 2 weeks. About 10 days later she developed an incomplete intestinal obstruction, from a plastic peritonitis, was readmitted to the hospital, operated on for releasing of the adhesions, which were very generally distributed throughout the abdominal cavity, and again made a prompt recovery.

A white woman, 36 years old, para 4, was transferred from the Obstetric Ward to our service on account of hemorrhage from placenta previa. She was 8½ months pregnant. Cesarean section was performed and 2 live babies were removed.

Our service has been much more completely equipped by the addition of 150 mgm. of radium. This was purchased in November and was used in 2 cases of benign uterine hemorrhage the last few days of my service. With this amount of radium added to our armamentarium we feel that we are now in a position to treat cases of malignant diseases more satisfactorily, without the

necessity of imposing on the hospitals of our neighboring cities. It might be well at this time to relate some of the advantages and disadvantages in the use of radium in the care of gynecologic cases afflicted with malignant diseases.

At the Memorial Hospital in New York City, Dr. Healey thinks radium should not be used in the following cases:

In uterine tumors larger than the size of a 3 months' gestation; in the presence of any acute inflammatory condition; in the presence of adnexal disease; for fibroid tumors which appear to be pedunculated, either subserous or submucous; in fibroids in women under 35 yr. of age unless there is some constitutional contra-indication to surgery. Dr. Healey thinks that another type in whom radiotherapy is contra-indicated is where the psychology of the individual is such that she is not content unless the tumor is removed surgically. Cachetic patients are unfit subjects for irradiation. He thinks it is of very great help in many gynecologic conditions, especially in carcinoma of the cervix. Here radium should always be used in preference to surgery. Carcinoma of the fundus without involvement of the adnexa should be treated by hysterectomy. The hemorrhage from a small uterine fibroid in a young woman may be controlled by radium; 50 mg. should be inserted in a capsule in the uterine canal and allowed to remain for 24 hr. The vagina should be entirely packed with plain gauze and the radium container fastened in the cervix by one stitch.

The early diagnosis of malignant disease is equally as important to the radiotherapist as to the surgeon and biopsy offers a safe, easy and almost certain method of diagnosis. The character of the tumor influences to some extent the dosage of radium to be employed. Cervical carcinoma may of course be either basal cell or squamous cell. Diagnostic curettage naturally falls under the category of biopsy. Sampson objects to this operation, asserting that transtubal dissemination of carcinomata cells is prone to occur. Norris, of Philadelphia, in his new book, has recorded the history of a case in which he believes carcinoma followed diagnostic curettage by transtubal dissemination. Intra-uterine irrigations or the piston-like actions of a radium carrying rubber tube or other instrument at the completion of curettage has been mentioned as a factor in the dissemination of cancer cells. The late Dr. John Clarke was accustomed to using a uterine sound, followed by curettage and making a histologic examination of the tissue scraped with the sound from the fundus before the curettage.

Deaver and Reimon, of Philadelphia, recommend diagnostic abdominal hysterotomy, a procedure which is not considered generally justifiable. Bloodgood's recommendation is to remove a portion of the cervix for histologic examination by the actual cautery, basing his choice on the theory that the cautery as it cuts seals up the avenue of possible dissemination, while Ewing advocates the use of a knife, believing that the reaction and congestion incident to the cautery outweigh its advantages. Norris prefers a knife followed immediately by the cautery with dull heat. I think the choice of these methods is purely theoretic and that the important part for us to consider is the positive early diagnosis by our laboratory of the malignant character of the tissue under suspicion, and its susceptibility to irradiation.

Dr. Norris in his book "Radium in Gynecology" states that the difference between neoplasms com-

posed of embryonic tissue and those made up of adult tissue constitutes a definite factor in the success or failure of radiotherapy. Thus, unripe or basal cell carcinomas yield very readily to irradiation, whereas those of the squamous cell or ripe type are not likely to be suitable for this type of treatment. In the Woman's Hospital, New York City, Drs. Ward and Farrar employ a trial dose of irradiation in order to ascertain as far as possible the susceptibility of the tumor and of the surrounding tissue. The majority of large European clinics treating cervical cancer by radium are also employing deep x-ray therapy, although there is much diversity of opinion regarding the combining of these methods.

A general discussion followed, by various members of the staff.

BERGEN COUNTY

Spencer T. Snedecor, Reporter.

The annual meeting of the Bergen County Society was held January 10, at the Hackensack Hospital. Reports presented by the retiring officers were evidence that the year 1927 had been noteworthy in many ways.

Dr. George W. Finke, of Hackensack, the retiring president made the following brief remarks:

"As I am giving up the presidency of this society, I want to tell you that it has been a distinct pleasure to act in this capacity. I have enjoyed it a great deal during the last year. Many new men have joined the society. Meetings have been held regularly and, for the first time, at the different hospitals of Bergen County—Englewood, Holy Name, Bergen County Isolation, and Hackensack—where the programs were supplied by members of the respective staffs. I have felt that these meetings have brought us closer together in the bonds of medical fellowship and I know personally that I am better acquainted with some of the men in other institutions than ever before. Formation of the Woman's Auxiliary during the past year I consider a distinct achievement of my term of office. I hope that in the near future additional work can be planned out for them which will benefit us mutually. A number of physicians, distinguished in our profession, have spoken at our meetings and their talks and demonstrations have been most instructive. In relinquishing this position, I know it will pass on to a worthy successor. I desire to thank the committees for their loyal support during the past year, and especially my associate officers—Vice-President MacCormack, Secretary Clark, Treasurer Sarla, and Reporter Snedecor."

The annual report of the secretary was read by Dr. E. W. Clark, of West Englewood. In reviewing the meetings of the past year he mentioned the very successful and enjoyable annual dinner held at the Swiss Chalet. The average attendance at the meetings has been approximately 50 members. On January 1, 1928, the number of members on the roll was 137. During the year 16 new members were elected and the application of 4 more are pending; 5 entered by transfer from other societies outside the state, while 2 of our own members have left this locality. The death of one of our honored members, Dr. John J. Haring, is noted. Dr. Clark also mentioned formation of the Woman's Auxiliary last May as one of the most important steps of progress during the year.

Dr. Michael Sarla, of Hackensack, gave the Treasurer's report:

Balance on hand January 1, 1927	\$ 252.97
Received during 1927.....	2026.40
	Total
	\$2279.37
Expenses	1592.00
	Balance
	\$ 687.37
Savings account with interest to January 1, 1927..	\$1134.99

Election of officers resulted as follows: Dr. F. C. MacCormack, of Englewood, was elected President; Dr. George M. Levitas, of Westwood, Vice-President; Dr. Edward W. Clark, of West Englewood, Secretary; Dr. Michael Sarla, Hackensack, Treasurer; Dr. S. T. Snedecor, Hackensack, Reporter; Dr. J. Finley Bell, Englewood, member of the State Nominating Committee; Drs. Charles Knox, R. E. Knapp, and E. W. Clark Annual Delegates to the State Society.

Dr. MacCormack accepted the chair and addressed the society briefly, saying that he hoped to continue the progressive policies of his predecessors and offered for consideration of the society, the suggestion of having meetings rotate regularly between the different hospitals.

Dr. George W. Finke immediately asked for the floor and presented the President of the Society with a gavel, in the following words:

"Feeling the need for a gavel occasionally during the past year to bring the meetings to order I became aware that the society was not in possession of one of those implements. I, therefore, obtained this gavel and present it as a token to the Society and to you as President. I know that it will not be used often but if you are in such a position as I was tonight in calling the meeting to order when my voice would not rise high enough to be heard, you will be very much inclined to take the gavel from the box and call for order. It gives me decided pleasure and honor to be able to present this to the Society."

Under new business, a committee was appointed to investigate the action of the Hasbrouck Heights Board of Health in appointing an Osteopath as School Physician.

Dr. Howard M. Cooper, of Rutherford, moved that Dr. Rodman, of Lyndhurst, be made an Honorary Member of the Society, since he had retired from practice because of ill health.

Mention was made of the death of our honorary member Dr. John J. Haring, of Tenafly, and Dr. Pratt, of Dumont, was asked to draw up a resolution of condolence.

A resolution from the Essex County Society against the action of the State Society in endorsing annual registration was read. Dr. Archangelo Liva, of Rutherford, member of the State Board of Medical Examiners, stated the position of his Board on this matter. The Society took no action.

The paper of the evening was read by Dr. David C. Bull, Assistant Attending Surgeon of the Presbyterian Hospital, New York City, "Trends in Modern Surgery". He said that cholecystotomy was now the operation of choice in acute gall-bladder disease. Most surgeons prefer resection of a gastric ulcer to a gastro-enterostomy, but for duodenal ulcer the gastro-enterostomy is the method of choice. There is considerable discussion at the present time of the value of subtotal gastrectomy. Under the mod-

ern treatment of empyema, the chronic discharging chest sinus is becoming unknown, except in tuberculous cases. This is brought about by adequate drainage of the thoracic cavity, bottle blowing and high caloric diet. The operation for collapse of the chest wall seems suitable in a few cases of tuberculosis. Results from operative procedures on lung abscesses have been disappointing. Orr's treatment of osteomyelitis is worthy of consideration. Analysis of the results in fractures made by the American College of Surgeons, shows our treatment in general gives too many permanent disabilities.

Dr. Bull spoke at length on the importance of blood grouping for transfusions. The follow-up clinic is a decided step in advance, for here we learn that 5% of hernias recur within 2 years after operation; that many cases of chronic appendicitis and gall-bladder disease have the same symptoms after operation; and also that our treatment for peptic ulcers is unsatisfactory.

Malignancy in general, proves fatal within 2 years, despite surgery, radium and x-rays. The group clinics are a recent development of note and have advantages. For instance, a thyroid case may well be studied from the point of view of the cardiologist and x-ray man as well as the surgeon.

The paper was discussed by Drs. Gilady, Bell, MacCormack and Lipman.

BURLINGTON COUNTY

Roscius I. Downs, M. D., Reporter

A regular meeting of the Burlington County Medical Society was held Wednesday, January 11, 1928, at 1 p. m., at the St. Mary's Guild House, Burlington, New Jersey. There were 30 members and guests present with President Anderson in the chair.

The guests present were Drs. Walt P. Conaway, President of the State Society; J. B. Morrison, Recording Secretary of the State Society; H. O. Reik, Editor of the State Journal; James Hunter, Jr., of Westville; Buzby and Hollinshed, of Gloucester County; John Gilbride and Reynold S. Griffith of Philadelphia.

After a splendid dinner, the meeting was called to order and minutes were read and approved. Dr. M. H. Schisler, of Florence, was elected to membership and signed the constitution.

Dr. Walt P. Conaway said that he was present because it was one of his duties to visit all of the county societies once during the year. To date he has visited 17 societies and 4 more remain. Also he wished to tell us of the activities of the state society. An "antidiphtheria" campaign is now sponsored by the state society. The plan is to carry the message to every physician and parent in the state through local civic clubs, county medical societies, parent-teacher associations, parochial schools, health officers, etc. In New Jersey, in 1920, there were 952,000 children and now there are one million children below the age of 15 years. Only 125,000 of these children are immunized against diphtheria. During 1921 to 1926 there were over 500 deaths a year and over 6000 cases of diphtheria reported each year. Prior to 1920 there were 50 cases per annum at the institution at Skillman, but no cases develop there now because of the immunization of all inmates started at that time. This proves the usefulness of such a campaign.

Health, accident and automobile group insur-

ance were spoken of; automobile insurance is procurable at 20% reduction of usual rates.

In the educational program Dr. Conaway said that Dr. Reik and his assistant were kept busy talking before local women's and civic clubs. The state society now has use of a radio broadcasting station. Fifteen minutes every Friday evening at 7.45 p. m., at Atlantic City station, WPG are allowed for health talks.

A home for the New Jersey State Medical Society is now under consideration. It is felt that one of the oldest medical societies should have such a home. The Philadelphia Medical Society has one, Bergen County Society is securing one; District of Columbia have recently spent \$100,000 for a home.

The plan of the annual meeting is changed somewhat to have a better attendance. Of the 2400 members only 350 to 400 or 15% attend the annual meeting. The first day, Wednesday, will be taken up wholly by the House of Delegates. The next 3 days, Thursday, Friday and Saturday will have the scientific programs. There will be a special eye, ear, nose and throat section under leadership of Dr. Linn Emerson, of Orange, also a special pediatric section. Moving pictures on medical subjects will be scheduled. The woman's auxiliary will also be in session.

An increase in number of county society meetings during the year was urged. This would increase attendance at the meetings and also stimulate interest in medical subjects. There are 3 counties that only hold semi-annual meetings. Others hold quarterly meetings while the most active societies have 6 or 7 meetings a year. One meeting a year should be used entirely for the discussion of medical economics including a discussion of fees to patients and group practice, etc. There should be a committee on public relations. One medical member, a public speaker, should be appointed to discuss medical problems before social and civic clubs. Organized newspaper publicity should be utilized. The public demands the coöperation of medical men on medical subjects.

Both Drs. Morrison and Reik followed with talks on the activities of the state society. The members present showed their appreciation of the presence and efforts of the state officers by their unanimous approval of the annual registration bill and the antidiphtheria program. The suggestion of increase in the number of meetings a year was received favorably and will be further discussed and voted on at the next meeting.

Because next year is the hundredth year of the Burlington County Society, President Anderson thought a fitting celebration should commemorate this anniversary. He, therefore, appointed a committee composed of Drs. Stokes, Marcy, and Newcombe to prepare for this celebration.

Dr. Howard C. Curtis, Chairman of Section of Practice of Medicine, announced the following program:

"Some Contrasts with Forty Years Ago," by Dr. Joseph Stokes, of Moorestown, New Jersey. In this paper Dr. Stokes developed in an exceedingly pleasing and instructive manner the contrasts of the early medical educational advantages, the problems of practice, with those of the present day. The many and wonderful medical discoveries since 1884 were enumerated which compared favorably with the marvelous inventions in other fields.

Dr. Reynold S. Griffith, of Philadelphia, read a

paper on "Diagnosis of Organic Heart Conditions." This very instructive paper will be forwarded for publication in the journal.

The meeting adjourned to meet at Moorestown in April.

CAMDEN COUNTY

R. E. Schall, M. D., Reporter.

The regular monthly meeting of the Society was called to order at 9 p. m., Dr. T. W. Madden in the chair. There was a very good attendance, and we had with us Dr. Walt P. Conaway, President of the State Society, Dr. Henry O. Reik, Executive Secretary, and Dr. John J. Gilbride, of Philadelphia.

The minutes of the previous meeting were read and approved. A resolution was passed asking the Board of Health to place the toxin-antitoxin treatment of school children on the same basis as vaccination.

SCIENTIFIC PROGRAM

Consideration of Fractures

Program—Fractures

1. General considerations

P. M. Mecray, M. D.

2. The operative treatment

J. Wesley Barrett, M. D.

3. The non-operative treatment

I. E. Diebert, M. D.

4. The end results

A. S. Ross, M. D.

All of these papers will be tendered the Journal for publication in full, as a symposium.

CUMBERLAND COUNTY

E. S. Corson, M. D., Reporter

The semi-annual meeting of the Cumberland County Medical Society was held at the Weatherby House, Millville. It was exceptionally well attended and the program full of helpful information. Dr. J. S. Knowles presided.

The Treasurer's Report showed a good balance, testifying to the efficiency of Dr. H. H. Wilson. The names of Drs. Muriel Ramsey, D. S. Bostwick and F. A. Detrick were proposed as members. The motion affecting the annual registration of physicians was laid upon the table until the next meeting.

Dr. Francis A. Fought, of Philadelphia, presented a valuable paper on "The Practical Application of the Blood Pressure Test." This has a definite place in making a diagnosis and depends upon the individual interpretation, but it is a mistake to treat pressure per se; as it is only a reflection of some underlying cause. The procedure should be carried out quickly. The greatest value comes from routine use with a record of findings. Every new case should have a test. Pulse pressure is the essential factor. In arteriosclerosis there may be a variation in both radical arteries. The usual rise has been placed at 2 m.m. per year, but recent findings have placed it at a fraction of a millimeter less. There is no variation in sexes. The auscultatory method is most accurate. In athletes it is higher. Arrhythmia may be discovered, also advanced myocarditis. Essential hypertension does not exist.

Dr. Collier F. Martin, of Philadelphia, gave an illustrated lantern lecture on "Proctology for the

General Practitioner." Embryonal tissue explains how abscesses originate in the crypts of Morgagni. A blind external fistula is non-existent. Instead of incision, take out the entire cavity top; apply vaseline gauze. The cavity will granulate up itself. The internal opening is an indurated knot. Always use a large probe and avoid traumatism. A fissure is an infected ulcer. The pain of a fissure lasts 15 or 20 minutes after defecation, until the muscle is tired out. Pruritus is a most frequent condition; and difficult to remedy. The application of pure carbolic acid neutralized by alcohol is helpful. Stricture of the rectum is always due to repeated infections. There is no operation to cure. The cicatrix always reproduces an exaggerated condition. External hemorrhoids should be let alone or picked up and cut off; don't pack. Prolapse of rectum should be distinguished from hemorrhoids. All tumors are quasi-malignant.

Dr. J. B. Morrison, Recording Secretary of the State Society, gave a postprandial address in which he called attention to the reasons and benefits of annual registration of the physicians of the state; also the need of licensing the private hospitals of the state to provide for their regular inspection.

GLOUCESTER COUNTY

James Hunter, Jr., M. D., Reporter pro-tem.

A regular meeting of the Gloucester County Medical Society was held at the Woodbury Country Club, N. J., Thursday, January 19, 1928, with President B. F. Buzby in the chair. The minutes of the last meeting were read and approved. The state campaign against diphtheria was, on motion, endorsed. The question of periodic health examination at the County Fairs was tabled for the present.

Dr. Piper, Professor of Obstetrics at the University of Pennsylvania, gave an informal but very informative talk upon "Some of the Complications of Pregnancy and Labor", touching upon the following points: Constitutional diseases complicating pregnancy, i. e., tuberculosis, decompensation disease of the heart; pernicious vomiting of pregnancy; how far should we carry the patient along; when should we terminate the pregnancy and why? Dr. Piper then went into the question of eclampsia, etiology and treatment, most exhaustively.

A full and interesting discussion followed, participated by most of the men present.

A rising vote of thanks was extended to Dr. Piper for his most instructive talk.

Dr. Hunter then read a brief paper, detailing "Three Cases of Iridocyclitis; Two Due to Sinus Infection and One Due to Perforating Wound of Eyeball".

The society then adjourned to the dining room, having as their guests the members of the Woman's Auxiliary of the Gloucester County Medical Society. All felt that they had spent a most profitable and enjoyable evening.

HUDSON COUNTY

M. I. Marshak, M.D., Reporter

The Hudson County Medical Society met at the Carteret Club, Jersey City, on January 3, with Dr. S. R. Woodruff presiding.

A discussion of the activities of the Committee on Abuse of Medical Charities, took place and a

request was made to increase the number of Jersey City men on the committee; also that a fund be created to finance the necessary investigation on cases reported. Attention was called to the fact that a great deal of this abuse was due to the physicians themselves who sent patients to the hospitals for x-ray and other laboratory work to be done without charge. Drs. Muller, Sweeney, Butler, Dodson, Nelson, Larkey and Woodruff took part in the discussion.

Dr. R. W. Gelbach, of Hoboken, because of ill health, asked to resign from the society. His resignation was accepted with regrets.

Dr. Sweeney spoke of having a committee appointed to make up biographic sketches of the old-time practitioners of Hudson County. The matter was referred to the secretary.

Dr. Piskorski asked that the secretary try to find out from the group insurance committee of the State Society, the status of the members who had applied but had as yet received no information as to whether their applications had been accepted.

Dr. Woodruff showed slides of a case of fused unilateral kidney with pyonephrosis of the lower section and aberrant urethra. The patient was an 8 year old colored female who had been ill for 1 week with fever up to 105°. She had abdominal pain, weakness and malaise but roentgenogram of the chest and 3 Widal tests were negative. A plus Wassermann was found, and also abdominal distension with tenderness and rigidity of the left flank. On cystoscopic examination, the right ureteral orifice could not be found; the second orifice being discovered in the floor of the urethra, exuding pus. Diagnosis of a unilateral fused kidney with partial pyonephrosis was made, and a heminephrectomy performed with good results.

Dr. M. J. Stein showed a case of *Streptococcus viridans* septicemia with recovery; the patient looking quite well, 2 years later. He was a male aged 30, whose chief complaints had been fever, marked loss of weight (30 lb.) and strength. Thorough examination revealed no pathology until a blood culture proved to be positive for *Streptococcus viridans*. There were 18,000 white cells with 87% polys. At the end of the sixth week an embolus occurred in the liver. In 3 months convalescence was well on its way. No cardiac signs developed at any time. No special therapy was given.

During the discussion by Drs. Pearlstein and Jaffin, a suggestion of a mural endocarditis was made.

Dr. von Decsten reported on a case of "reflex cough". (See Case Report in this Journal).

Dr. Miner showed a case of gastric carcinoma superimposed upon an old gastric ulcer. The patient had endured stomach trouble for 6 months previous to first consultation. The x-ray plates showed a 20% residue in the six hour test. This, he felt, made the case urgently surgical. As the patient refused operation he was placed on a modified Sippy diet on which he gained 20 lb. in 6 months, but then began to lose again. One year later he consented to operation and a partial gastrectomy was done under local anesthesia. The pathologic report was multiple adenocarcinoma associated with ulcer. This case was discussed by Drs. Sweeney, Perkel, Freile, Pearlstein and Miner.

Dr. Jaffin presented "Serial X-Ray Plates Showing Healing of Cavities": (1) A case of pulmonary tuberculosis, sputum positive, in which the x-ray signs of cavity cleared up in 3 years time. (2) In this case the cavity signs cleared up in 6 months. It was diagnosed as tuberculosis but

did not have positive sputum. Only 1 examination of the sputum was made as the patient lived away from the city. (3) Postpneumonic abscess, with cavity in the left base. In 1 month, the cavity disappeared and in 8 months, the lung appeared normal. (4) Bilateral cavities in the upper lobes, diagnosed as gangrene. These cavities cleared up in 3 months, leaving x-ray plates whose appearance were normal.

Drs. Pollak, Curtis and Luippold discussed these cases.

Dr. Feit showed a case of "actinomyces of the face" which had cleared up under small doses of x-rays and KI. He advised that these patients should never be operated upon. He also showed 2 cases of "lupus erythematosus", stating that this was a local manifestation of a systemic condition. The local condition is disseminated by radiations of any kind and cases should never be exposed to such treatment. Both cases cleared up under treatment with gold salts; he used triphal. Next was a case of "filaria sanguinaris" which because of an associated syphilis was treated with salvarsan, the filariasis incidentally clearing up.

Dr. Margaret Sullivan reported on the "treatment of Neisserian infections in children with diathermy. Had treated 10 cases and was able to obtain negative smears after 10 to 16 treatments; 200 to 300 m.a. for 20 minutes with anterior and posterior electrodes, used 3 times a week.

Dr. Perlberg showed x-ray plates of "bone carcinoma with unusual metastases", which were scattered over the chest wall, arms, legs and in the lungs. He also showed a plate illustrating pyonephrosis with a number of large calculi and a group of small stones ranged like gall-bladder stones.

Dr. Marshak showed a plate of a "probable dermoid cyst of the lung" which occupied a position midway between the anterior and posterior walls and between the mediastinum and the axilla, in the left upper lobe. There were no definite physical signs and the patient was apparently healthy.

Osler Clinical Society

M. I. Marshak, M.D., Secretary

The Osler Clinical Society met at the Union League Club, Jersey City, on January 18, with Dr. Donald Miner presiding.

Dr. Miner presented "A Case of General Peritonitis with Sequels." The patient was a girl, aged 12, who developed a gangrenous appendix which had to be operated upon. On the fourth day after operation she developed a high fever which was due to bronchopneumonia of the left base. On the seventh day the temperature, which was septic in type, reached 107°. A diagnosis of pelvic abscess was made, but was proved wrong by an exploratory incision. Precordial pain became prominent on the thirteenth day when an x-ray plate showed a pericardial effusion as well as fluid in the left pleural sac. A thoracotomy under local anesthesia was done and the left pleura drained. Examination of the fluid showed a mixed infection with colon bacilli present. After ilioostomy and intravenous saline drip, the patient made a good recovery.

Dr. Jos. Koppel described 2 cases of "Probable Primary Renal Tuberculosis." The diagnosis in both cases was made by cystoscopy. No tubercle bacilli were found in the urine. He showed the specimen from the second case.

"A Symposium on Syphilis" was held, in which

the following members took part: Dr. M. Shapiro, on skin syphilis; Dr. J. Heilbrunn, on congenital syphilis; Dr. W. Braunstein, on pathology; Dr. M. Frank, on bone syphilis; Dr. Joe Koppel, on treatment; and Dr. H. Perlberg, on the x-ray diagnosis of syphilis.

Dr. Shapiro showed colored slides of various types of initial lesions, also of the skin and mucous membrane manifestations.

Dr. Heilbrunn discussed congenital syphilis under 4 headings, fetal, infantile, late or tardy, and latent syphilis. He stated that late syphilis showed all the lesions of the tertiary stage except cardiovascular disease, cerebrospinal lesions being quite frequent. The prognosis in severe cases is bad. In cases recognized early, the prognosis is good. Late syphilis is damaging but prognosis as to life is not bad. Congenital syphilis can be prevented by treating the mother before delivery.

Dr. Braunstein stated that the type of syphilis developed depended on the strain of spirochete present, the various strains having marked affinity for different kinds of tissue. He discussed the biologic reaction to the invasion of or inoculation by the spirochete. The lesion is a granuloma which on degeneration forms caseated masses called gummata. The perivascular infiltration is the most common characteristic, giant cells are rare but fibrosis is common. The primary lesion shows a marked proliferation of new vessels with round cell and fibroblast infiltration.

Dr. Frank said that bone syphilis is rarely seen until 18 months have elapsed since infection. The predisposing cause is the presence of the virus in the bone marrow, while the exciting cause is usually some bone injury. The bone first becomes spongy, due to vascular changes, but later becomes eburnated. The double outline seen on the x-ray plate is due to the raised periosteum. The pain, as in all bone disease, is worse at night. The soft parts become secondarily involved and in time ulcerate.

Dr. Joe Koppel stated that the treatment should not be standardized but must be individualized. The patient rather than the disease should be treated. Quiescent syphilis is less amenable to treatment than some of the malignant types. If treatment is instituted early, before the Wassermann reaction is present, a great many cases can be cured. Where kidney or circulatory disease is present, arsenicals are dangerous to use. The usual drugs used in treating syphilis are the arsenicals, mercury and bismuth.

Dr. H. Perlberg showed x-ray plates and slides of various types of bone syphilis, as well as "Before and After Treatment" slides of syphilis of the lungs and stomach.

HUNTERDON COUNTY

Leon T. Salmon, M. D., Reporter.

The regular mid-winter meeting was held in Frenchtown, on Tuesday, January 24, 1928.

Present at this meeting were Drs. Hamilton, Williams, Coleman, M. H. Harmon, Heil, Decker, Leaver, Tompkins and Salmon. After the reading and approving of the minutes of the former meeting, a communication from the custodian of the Society's Library was read, asking that the Library be removed from his keeping. After considerable discussion it was decided that the matter should be placed in the hands of a committee, consisting of Drs. Harmon and Tompkins, to dispose of as an inspection of the contents of the library warranted.

A telegram from Dr. Reik, asking an audience in the matter of a Woman's Auxiliary local organization, was received and the secretary was instructed to write Dr. Reik assuring him of a welcome at our next meeting. By regular motion the society put itself on record as approving the annual registration legislation proposed by the State Medical Examining Board.

Drs. Fuhrman and Decker reported two interesting poisoning cases, which were discussed freely.

After another of those unusually good Frenchtown dinners the society adjourned.

MERCER COUNTY

A. Dunbar Hutchinson, M.D., Secretary

The Mercer County Medical Society met in the Carteret Club on January 11, 1928, President Charles R. Sista in the chair. The minutes of the preceding meeting were read and approved.

Elmer H. Brown, D.D.S., was introduced by the President and read a very instructive paper entitled "Oral Diagnosis", illustrated with radiographic pictures. Dr. Brown gave a short outline of the ancient practice of dentistry, stating that the relief and comfort of the patient was at that time the first consideration in the minds of practitioners. In 1896 Prof. Roentgen placed before the world the Roentgen ray, and from that time on pathology has transformed the treatment of pulpless teeth into preventive measures for the relief of general systemic conditions so prevalent. The various methods for a complete modern dental diagnosis were then enumerated and described in detail. The relationship of pulpless teeth to their surrounding tissues and their effect upon such tissues was interestingly defined. Having, by a thorough study of the patient made a diagnosis, the next step should be the proper treatment. These several procedures Dr. Brown very strongly emphasized and profoundly impressed upon his audience by forceful and direct manner of speech. The pictures shown by Dr. Brown, with the assistance of Dr. Plankey, graphically displayed the many serious conditions with which the surgeon of dentistry contends in his battle for extension of the life period.

Several members took part in the discussion which followed; Dr. Vaczi describing an interesting case coming under his observation. Dr. Brown closed the discussion with a plea for indulgence on the part of the medical men, pending further progress in the development of x-ray treatment, which in time will aid in a more intelligent interpretation of the films.

Relative to the communication bearing upon "Periodic Health Examinations" as an educational program, this subject was placed in the hands of our member on the Welfare Committee, Dr. D. L. Haggerty.

Several communications, relative to one of the society members delivering a lecture before an audience of medical men, were read and discussed; the subject, upon motion, referred to the Board of Censors.

A further discussion arose, following the statement by one of the members, relative to certain rumors surrounding the denying of hospital privileges to one of the members of the society. This subject upon motion was also referred to the Board of Censors.

A communication from the Essex County Medical Society, relative to annual registration, was read and ordered filed.

Following adjournment, a luncheon was served.

PASSAIC COUNTY

John H. Carlisle, M.D., Secretary

The regular meeting of the Passaic County Society, held January 12, 1928, was presided over by Dr. G. E. Tuers. Minutes of the previous meeting were read and approved.

The following were elected to membership: Drs. R. M. Shepard, J. Roth, W. Schwartz, E. Revesz and D. H. Tellman.

The President spoke of his desire to procure a County Home for Incurables. He suggested that owing to the approaching completion of the new County Tuberculosis Sanitarium (Valley Farm) several units of the Paterson Isolation Hospital would be vacated. These units would give a maximum of 100 beds, which would give the other hospitals of the county a considerable degree of relief. He also suggested establishment of an observation ward for mental cases at the same site.

Favorable discussion followed, and a motion was passed that a committee of 5 be appointed to consider the whole subject and report at the next meeting.

The scientific program consisted of an informal talk by Dr. W. L. Sneed, of New York City, on the "Orthopedic Examination, Care and Treatment of Early Childhood". Dr. Sneed stressed the value of early recognition and correction of deformities. He mentioned particularly: club foot, bow legs, congenital hip, rigid spines, Erb's palsy and torticollis. Dr. Sneed permitted the members to question him during the course of his talk and an interesting discussion resulted, in which Drs. Morrell and Rauschenbach took a leading part.

UNION COUNTY

Russell A. Shirrefs, M. D., Reporter

About 80 members attended the quarterly meeting of the County Society held on the evening of January 11, at the Elizabeth General Hospital, with Dr. Frederick W. Sell, of Rahway, presiding. Following routine business, a number of patients were presented for study and discussion.

Dr. M. Vinciguerra showed an example of "functional mutism" in a boy of 7, who never spoke for 2 years while in school although able to talk outside. The condition was remedied through psychotherapy. A boy of 8, suffering from hypopituitarism, did not talk until after the age of 6; had enuresis day and night; and the mentality of a low grade moron. Pituitary extract $\frac{1}{2}$ gr. t.i.d. made a wonderful improvement. A youth, 19, with distressing stammer and stutter due to dysfunction of the peripheral nerves supplying the speech apparatus, showed marked improvement after learning how to breathe correctly. A woman, 30, had consulted 15 doctors for "pain in her tongue" due to a psychoneurosis of anxiety type which was cured by psychotherapy.

Dr. Louis Chaiken presented for Dr. I. Lerman a man with "granuloma inguinale." Donovan bodies were found, but the ulcer failed to heal until after treatment by cauterization, ultraviolet rays, and 190 injections of antimony, covering a period of 22 months. A man, 33, after an illness of 5 years, cured by operation removing stone from left ureter. A boy, 13, showed cure following operation for undescended testicle.

Dr. Victor duBuse showed a boy of 5, in apparently excellent health following a polio-enceph-

alitis last August; Rosenau's serum was used.

Dr. J. E. L. Imbleau presented a girl, 17, who for months had suffered from repeated epistaxis, metrorrhagia, vomiting of blood and many cutaneous hemorrhages on the arms and legs. Transfusions of blood and various other remedies were unavailing, until a splenectomy was done and her thrombocytopenia cured.

Dr. Z. L. L. Griesmier presented a woman, 48, who at first showed symptoms of acute glaucoma. Prompt reduction of tension, and further investigation, revealed the true condition to be a primary sarcoma of the choroid for which removal of the eye was advocated.

Dr. L. G. Beisler presented a man who had pruritus ani for years. Several hypodermic injections at various intervals of a 4% quinin and urea solution cured him.

A courteous letter from County Prosecutor David asked us to name an hour most suitable to our members for attendance when subpoenaed for testimony before the Grand Jury, and 10 a.m. met with most favor. The secretary was instructed to write County Judge Stein asking him to hear medical testimony in lunacy cases at 11.30 a. m. Our organization went on record in favor of state-wide annual registration of physicians, by a unanimous vote. A proposed constitutional amendment to change our meetings from 4 to 6 each year was favored by a majority, but was lost because it failed of a two-thirds vote.

One resignation was accepted on account of removal; two proposals for membership received; and Dr. Frederick W. Lathrop of Plainfield was enrolled as a new member. Dr. G. S. Laird, Westfield, and Dr. G. W. Strickland, Roselle, were elected to the Public Relations Committee. It was decided to invest \$1600 of our surplus bank funds in guaranteed first mortgages.

WARREN COUNTY

F. A. Shimer, M. D., Reporter.

Quarterly meeting of the Warren County Medical Society was held at the Washington Club Rooms, Washington, N. J., Tuesday, January 10, 1928, at 11 a. m.

Dr. G. H. Bloom, the president, in the chair. Among those present were Drs. Hackett, Zuck, L. H. Bloom, McKinstry, Drake, Cummins, Curtis, H. Bloom, Osmun, Shimer and Smith. The minutes of the regular previous meeting were read and approved.

K. Winfield Ney, M. D., of New York City, gave a very interesting and educational illustrated lecture on "Cranial Injuries and Intracranial Pressure".

Dr. Walt P. Conaway, President New Jersey Medical Society, gave an interesting talk outlining the work of the State Society for the year. Dr. Henry O. Reik, State Society Executive Secretary, gave a talk on Welfare Work, the State Antidiphtheria Campaign, and about organizing Women's Auxiliaries in each county of the state.

The ladies present were Mrs. L. H. Bloom, Mrs. Frank Curtis, and Mrs. G. Cummins. The first steps toward formal organization of a Woman's Auxiliary to the Warren County Medical Society were taken but election of officers was deferred until meeting to be held April 10.

A bountiful dinner was served at the Farrell Arms Plaza.

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DIET AND FERTILITY

DONALD MACOMBER, M.D.,
Boston, Mass.

The problems with which we are concerned in the study of fertility may be divided roughly into those dealing with sterility per se, that is, with disease or mechanical conditions so extensive that fertility has been lost altogether, and those where fertility still exists but for some reason or other has become so lowered that conception does not occur. Instances of the first sort are relatively simple, though in the nature of the case their cure may not always be easy. For example, closed tubes and double epididymitis are causes of absolute sterility. By far the great majority of the cases, however, which are ordinarily referred to as cases of sterility are really the result of a reduction in fertility in either one or both partners of a given marriage. We are here faced, then, with a confusion of terms, and it would probably be better to follow the suggestion of Raymond Pearl⁽¹⁾ that the term "fertility" be reserved for the marriage or mating, a fertile union being one in which healthy offspring are produced; and use the term "fecundity" to express the fertility of an individual. Using this terminology one could say that the cause of most sterile marriages is to be found in the lowered fecundity of one or both of the individual partners.

As a practical matter the first essential for curing a sterile marriage is the accurate estimation of the fecundity of both husband and

wife. This is a matter requiring great technical skill and is necessarily reserved for the specialist. But when it becomes a question of how to raise such lowered fertility we immediately find ourselves in a much broader field, and the question becomes one of general biologic and physiologic interest. Most of the factors which increase or maintain fecundity are those which appertain to the physiology of reproduction in general. In its broadest sense reproduction means the continued existence of a species and must include, not only the birth of healthy young, but their growth to adult size in such a way that they in turn will be capable of producing healthy sex cells, from the union of which further reproduction is possible.

I have chosen as my subject for this paper the effect of diet upon fertility. From what has just been said it will be understood, however, that it is impossible to consider the effect of diet upon either fertility or fecundity as entirely set apart from other phases of the reproductive cycle. While admitting the scientifically proved facts that reproduction in animals can largely be controlled through changes in diet, most physicians are, I believe, quite sceptical of the practical importance of dietary habits in human reproduction. Convinced as I am that diet plays an extremely important rôle in human reproduction, as well as in that of animals, I desire to set forth the evidence for this belief. It is a subject, moreover, which has a far wider appeal than most of those in connection with so-called sterility, which are of chief interest to the specialist alone. The family physician has an oppor-

tunity which is not open to most of his fellow practitioners. He follows the individual from birth through the growth of childhood, the development of adolescence, to maturity with the production of new life and the renewal of the cycle. At the present time more than 10% of all marriages are sterile. It seems as if the percentage were on the increase. A large proportion of these sterile marriages are the direct result of preventable conditions. It is my belief that a proper dietary standard insuring normal growth and development and the maintenance of full physiologic activity is the largest single factor which is directly under our control. Thanks to the recent work of many investigators our knowledge of what constitutes a proper diet has been vastly extended. If this knowledge can be applied practically there is every reason to believe that much sterility can be altogether prevented. While the prevention of sterility will be the result, it will only be one of the benefits to be derived from the application of the same general principles; of far wider application will be the resulting benefit in health to the individual and the improvement in other phases of the reproductive life, especially those of pregnancy and lactation.

The evidence which I wish to present is of 3 kinds: namely, that accumulated through many centuries of practical animal breeding; that which has come from deliberate experiments with animals under rigidly controlled conditions; and, finally, certain indirect evidence from controlled experiments with human beings. It is of course impossible in the limits of one paper to present more than the briefest sketch of this extensive material. Brief though this presentation must be, it does seem worth while to give it in order that there may be a clear understanding of just what may be expected to result from changes in diet. When it was demonstrated that changes in diet could affect reproduction in laboratory animals it was thought that it would be easy to demonstrate similar effects with human beings. When this was found not to be the case the whole subject was relegated to the category of unsupported theory and condemned as far as human beings were

concerned. This came about through a lack of understanding of the complexity of the conditions which surround human beings. The truth of the matter probably is not that diet is any less important to human beings, but that there are so many additional and uncontrollable factors in man's environment that it is hard to separate out and demonstrate the effect of diet alone.

Leaving man for the time being let us marshal our evidence with animals and then finally turn to the controlled experimental work which I believe demonstrates fully my thesis in regard to man himself. As long as there has been any recorded history man has been a breeder of animals. Thus there has grown up a large amount of "rule of thumb" knowledge for which, until recent years, there has been no scientific foundation. If a thing worked that was sufficient for the practical man, and he seldom bothered to inquire the reason why. While all breeders and fanciers have contributed to our general fund of knowledge the man interested in exploiting reproduction on a commercial basis has perhaps contributed most to our knowledge of how reproduction may be maintained at the highest possible level for the obvious reason that his livelihood depended upon his success in this regard. As examples, we may take the poultryman and the producer of milk. The poultryman's success depends upon the fecundity of his hens, that is, upon the number of eggs which they lay in a given time. By means of many methods he has been able to increase this from 20 or 30 eggs a year up to as much, in exceptional cases, as 300 in the same period of time. In part this has been due to breeding, but no matter how carefully a hen may be bred, if she does not receive the proper food from the time she is a chick until she reaches maturity she will not develop into the egg machine which is desired. After she begins to lay it is possible by poor feeding to ruin whatever potentialities she may possess. What then are the essential characters of the ration which poultrymen have found from actual experience to result in rapid vigorous growth and in high egg production after maturity. The first essential seems to be an ade-

quate percentage of readily available protein. If this is lowered both growth and egg production suffer at once. The next requirement is an adequate proportion of mineral salts, particularly calcium and phosphates. The third requirement is an abundance of green feed of some sort, and the fourth is that what would correspond to the total calories of a human diet shall only be limited by the hen's ability to digest and consume them; which last postulates a sufficient amount of exercise to avoid getting fat. A fat, inactive hen is never a good producer. It goes without saying of course that an abundance of pure water is a necessary part of any ration. It is an interesting fact that the dairyman has found that exactly the same dietary essentials are required for high milk production. It is possible, for instance, to notice an immediate effect in increase of milk produced by changing from a grain feed containing 20% of protein to one containing 24%. It is important to bear in mind these essentials, which are of a really fundamental character, when turning to a consideration of the scientific animal and human experiments.

Our scientific knowledge of the effect of diet upon reproduction has only developed within the last 15 or 20 years. Previous to that time a good deal was known in regard to the chemistry and digestion of foods but it was only with the discovery of the accessory food substances, or vitamins, that it became possible to plan experimental diets in such a way that the effect of changes of any one element upon reproduction could be determined. The first experiment designed to investigate reproduction on any large scale was one carried out at the Wisconsin Experiment Station on cattle by Hart, Steenbock, Humphrey and McCollum⁽²⁾. This was reported in 1911 and showed what an enormous effect changes in diet could have upon reproduction in the cow. This experiment was so important that it deserves careful consideration. Two series of young healthy cows were fed special rations during their pregnancies, and the results carefully noted. The ration of the first lot was limited to the wheat plant and its products. They were fed hay made from the

wheat plant cut green, and the grain in the ration consisted only of wheat or its by-products. In a similar way the ration of the second lot was limited to the corn plant and grain. As far as the mothers themselves were concerned there was little difference in weight though the cows fed on the corn plant were sleek and healthy appearing while those on the wheat were rough coated and seemed less healthy. The striking difference was seen in the calves. Those of the corn-fed cows were born at term and were healthy normal calves. Those from the wheat-fed cows, however, were all born a month or more ahead of time and were either dead at the time of birth or died within a few hours. Subsequent investigations have made it plain that there were 2 fundamental differences between these 2 rations. The first and most important arose from the fact that the corn ration is rich in calcium and the wheat ration is poor in this same element. It is obvious then that calcium must be necessary for proper reproduction. The reason for this lies in the fact that calcium is an absolute necessity for the formation of bones and that without proper bone development growth, intrauterine or extrauterine, is impossible. The other difference is one of degree due to the fact that the corn plant with its greater succulence and amount of green pigment also contains a greater amount of vitamins.

Since publication of this important work our knowledge of the vitamins has been greatly extended and another means has been developed by which the reproduction of laboratory animals can be adequately checked and which, therefore, has been extremely useful in controlling experiments along these lines. I refer to development of the technic of examining the cell content of the vagina, by which knowledge can be obtained of the occurrence of oestrus in certain laboratory animals, particularly the guinea-pig and the white rat. It is important to be able to recognize oestrus since, in animals, the period of desire coincides with ovulation. In the larger animals oestrus is easy to recognize both from the discharge of certain secretions from the vagina and the behavior of the animals them-

selves, but in the rat no such evidence exists and this method of examining smears from the vagina, which was first developed by Stockard⁽³⁾ and later by Long and Evans⁽⁴⁾, is absolutely essential if reproduction is to be studied in the laboratory. Having perfected this technic, Evans⁽⁵⁾ has gone on to investigate the effect of changes in the diet upon the regular occurrence of the oestrous cycle. He has made a great many original observations which are of particular interest. He has found, for instance, that reducing the amount of protein delays the appearance of the first oestrus and lengthens the resting interval between successive periods. He has also observed that curtailing the number of calories will also delay appearance of the first oestrus and prolong the interval if the reduction is slight in amount. If the amount of food is still further reduced the effect is even more extreme and there comes a point where activity of the reproductive tract ceases altogether or never develops though the animal may continue to function otherwise in a fairly normal manner except that it grows not at all or at a much retarded rate.

As another example of recent experimental observations on the effect of diet upon reproduction I will also briefly review work of my own⁽⁶⁾ upon the effect of a diet low in calcium. In this experiment record was kept of the occurrence of oestrus, the number of corpora lutea of pregnancy and the number of young born. It was a surprising fact that though half the animals were on a diet which contained only a relatively small amount of calcium, oestrus occurred at regular intervals and the number of egg cells and the number of young were normal as compared with the controls. Knowing the extraordinary effect which a diet low in calcium has on development of the calf this was a little difficult to explain until it was realized that the young of the rat contained practically no calcium at birth, their bones being entirely composed of cartilage. In order to get an effect comparable to that seen in the larger animals it was necessary to observe lactation on the decreased diet; then indeed an extraordinary change appeared. The growth of the young was much retarded and

unless the number of young nursed was kept extremely low all eventually died. Analyses of these young showed that they had far less than the normal amount of calcium in their bones. Analyses of the mothers themselves and roentgenograms of their bones disclosed the fact that their calcium reserve had been seriously depleted. An interesting side light was the effect of this diet, when combined with pregnancy and lactation, on the teeth of the mother. Caries of the rat's teeth is normally very rare, but under the conditions of the experiment developed in more than half the animals. These experimental studies on animals have been cited to show the methods of research and the kind of information which can be deduced therefrom. From this and from similar work our knowledge has been considerably increased in recent years. Much, however, remains to be done and many important phases have not yet been investigated.

I wish now to call to your attention a very important piece of work which was undertaken by Dr. Francis G. Benedict and associates⁽⁷⁾ in the nutrition laboratory of the Carnegie Institution in Boston in 1917. The final report of 701 pages appeared in 1919 as Publication 280 of the Carnegie Institution of Washington. Its title was "Human Vitality and Efficiency under Prolonged Restricted Diet". It will be noted that the work was done during the war at a time when many food restrictions were in force. The object was to investigate such food restrictions and to learn what effect they might have upon the general metabolism of the body. For this purpose, two squads of 12 men each were chosen from the students of the Springfield Training School. Squad B served as control, but later was also used for a short period of dietary restriction. Squad A, starting with an average body weight of 68 kilos and a diet containing between 3000 and 4000 calories and about 100 gm. of protein, was submitted to such dietary restrictions that they lost about 12% of their weight. To do this it was necessary to restrict the calories to between 1600 and 1800. When the weight had fallen to the desired level the calories were raised slightly to about 2100 or 2200 to maintain them at this point.

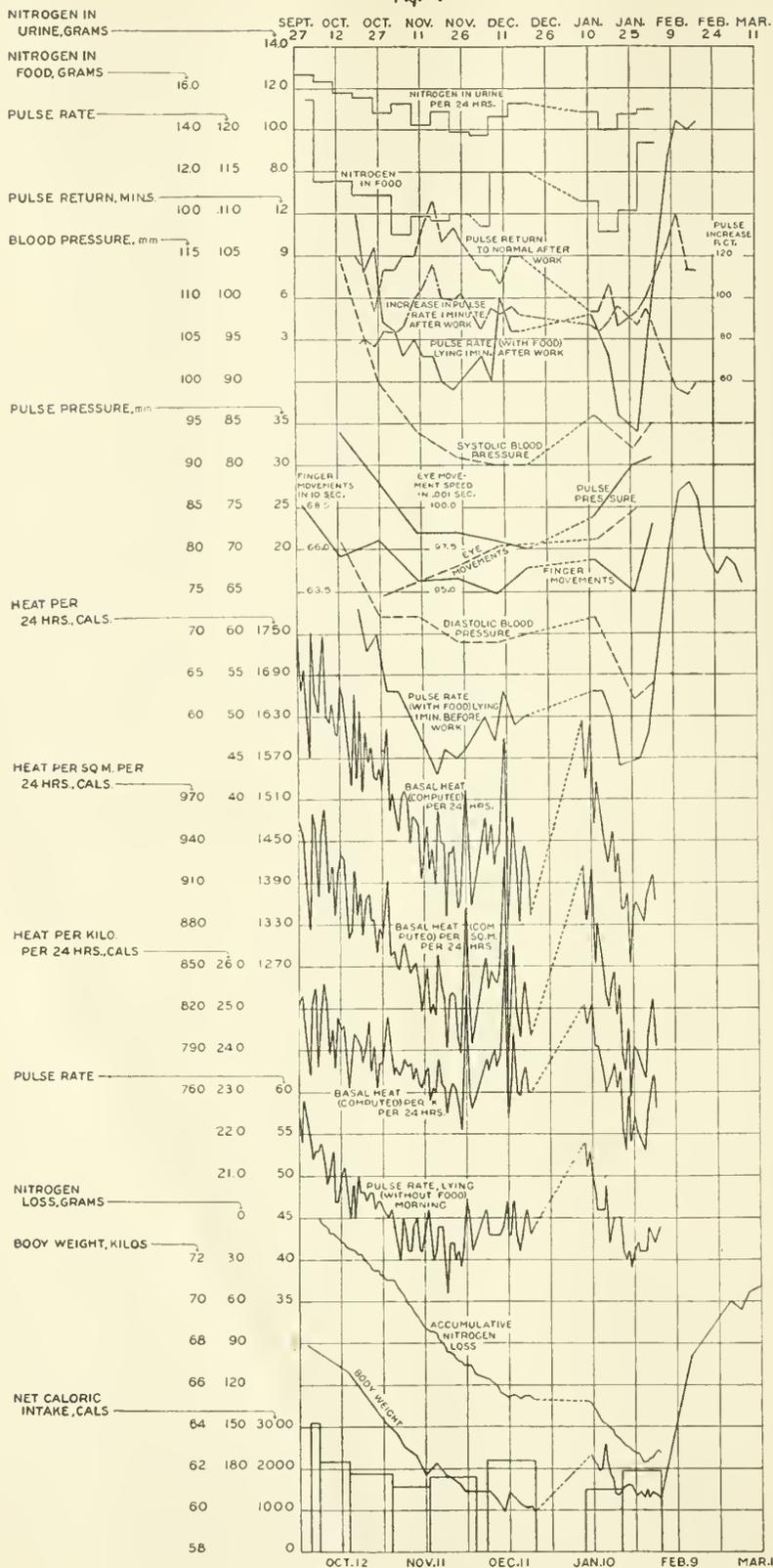
The dietary restrictions lasted about 4 months, with the exception of the Christmas recess. No attempt was made to alter the character of food eaten. The portions were merely limited so that the total calories eaten were as indicated. It has been said that before the experiment these men were taking about 100 gm. of protein. As the experiment progressed this amount dropped to very close to 60 gm. These men were apparently normal throughout the experiment and were able to carry on their regular work and exercise. They were under most careful supervision and prolonged observations were made on blood pressure, gaseous metabolism, nitrogenous metabolism, pulse rate, etc. Extraordinarily profound results were noted. (See Fig. 1.) For instance, the blood pressure dropped from 115 to 90 systolic, and from 80 to 63 diastolic. The morning pulse rate dropped from 60 to between 40 and 45. The basal metabolism fell between 18 and 20%. During the entire experiment there was an accumulated loss of nitrogen of approximately 175 gm. which would correspond to about 1100 gm. of protein. It was also noted that the reaction time for carrying out certain coördinated movements was definitely prolonged. Nearly all of the subjects showed a slight but definite anemia and toward the end began to develop mental irritability.

From the point of view of reproduction this experimental demonstration of the effect of restricted diet upon human beings leaves much unanswered. Profound though the effect was upon metabolism, circulation and protein metabolism, and though we may surmise that there undoubtedly was an equally profound effect upon fecundity and reproduction in general, we have no actual experimental evidence for this assumption. Certain observations were made, however, in regard to the sex life of these men and these are of such a striking nature that they confirm our suspicions that restricted diet does lower reproductive activity in men just as we know that it does in animals. The men observed were all single with the exception of one man. They were college students living and working under the usual conditions of college life and

taking a normal amount of exercise. The men noted without exception that while on the diet the occurrence of nocturnal emissions ceased altogether as did all erections or other sex phenomena. The one married man reported that when with his wife and while on the diet he had no evidence whatever of sex desire.

Taken altogether the evidence thus presented from breeders, from animal experimentation and from human experimentation seems quite conclusive that restrictions in the diet of one kind or another may have most profound effects upon reproductive activity in general. For the evidence to be complete we should be able to find and demonstrate the presence of clinical cases showing the effect of such restrictions. This I believe we can do. There are of course certain rare cases which will be seen occasionally by the specialist where some peculiar dietary restriction has been followed by extreme effect. Such, for instance, is the case of a man who developed scurvy on a diet prescribed for him for gastric ulcer. The scurvy was not recognized and the man nearly died. When examined later in regard to his fecundity he was found to have atrophic testicles and aspermia. As has been said, cases of this sort are rare and in themselves would hardly offer any adequate proof of the widespread existence of lowered fecundity from diet. There is, however, an increasingly large class of patients who do, I believe, show this very thing. They are perhaps more commonly women than men. The history is often somewhat as follows: For the first year or two after marriage they have avoided pregnancy and during this time have gained a great deal of weight. This has resulted perhaps from 2 causes; one that their chief occupation has been the preparing of food, and the other that marriage has reduced their customary amount of exercise to almost zero. Coincidentally they complain of the gradually lessening amount of the menses. There is often a change in the character of diet eaten, the amount of carbohydrate being out of all proportion to other elements. Becoming alarmed at the increase in weight, the patient then "diets" which often means restriction of some of the most valuable elements

Fig. 1



to what amounts to a practical starvation and the continued indulgence in sweets. The diet of such a patient will often figure as low as 60 gm. of protein, 50 gm. of fat and 150 gm. of carbohydrate, which makes a total of about 1300 calories. For the ordinary patient this would mean an extreme loss of weight but when these patients are examined they are usually still much over-weight. They will also be found to have a low pulse and blood pressure and a basal metabolism of minus 10 or 15%. There is often the secondary anemia which was found in Benedict's experiment. In such patients the metabolism has been so profoundly altered that they are able to maintain weight on as low a diet as the one indicated. They complain of lack of energy, nervousness and susceptibility to cold. These symptoms by decreasing the amount of exercise which they spontaneously take complete the vicious cycle and tend to increase the general effect. As regards reproduction they are sterile. It has already been noted that the menses are often scanty and it is not infrequent for the interval between periods to be prolonged even to the point of amenorrhea. As has been said, cases of this sort are becoming increasingly frequent both in the practice of the gynecologist and that of the general medical man. They are almost universally regarded as cases of primary endocrine dysfunction, and are usually considered to be evidence of hypothyroidism. There can be no question that the thyroid is inactive and that they often show great improvement when given thyroid extract by mouth. In view of the evidence which I just presented, however, I have a very strong conviction that the real underlying difficulty is one of an improper diet combined with lack of exercise. The extraordinary parallel which these cases present with the men of Benedict's experiment is so exact that we are obliged to postulate a similar cause.

Having now presented to you my reasons for believing in the importance of diet in reproduction I wish to give you a few practical details in regard to each of the elements of which diet is composed. (See Figs. 2 and 3.) First, as regards protein, so far as reproduc-

tion goes there can be no question of the superiority of that from animal sources, such as meat, fish, eggs and milk. No human dietary is likely to be so limited as to be deficient in any of the amino-acids necessary for growth, but the proportion of proteins in the diet and the total amount are very important. From what has been said it is obvious that for an adult of average weight 90 to 100 gm. are needed, yielding 360 to 400 calories, which is about 12 to 14% of the total calories (3000) needed under conditions of moderate activity. There are special conditions, such as the diet during the latter half of pregnancy, when it may be advisable greatly to restrict the amount of meat. This should be compensated for, however, by increasing the amount of milk protein and that from cereals and vegetables.

The fats are important as sources of energy and also because they contain the fat soluble vitamins. In a diet of 100 gm. of protein and 3000 calories the fat would be about 125 gm., leaving 350 gm. of carbohydrate to supply the remaining calories. These standards are for an adult man of average height and weight under conditions of moderate activity. Similar standards for a woman would be somewhat as follows: protein 90 gm. (representing about 14% of the total calories), fat 100 gm., carbohydrate 330 gm., with a total of 2600 calories. (See Fig. 4.)

The experiments of Evans⁽⁵⁾ showed that, in itself, a high or a low fat had no effect on reproduction, but subsequent experiments have shown that high fat makes the requirement of vitamin E⁽⁶⁾ higher than with the average diet. It seems that the more we know about the whole subject, the more complicated are the interrelations, and for that reason it is always wise, unless exceptional conditions exist, to keep the fat and carbohydrate in some such proportion as I have indicated. I need mention the carbohydrate proportion of the diet only to caution against an excess.

The importance of calcium and phosphorus has already been noted. It seems hardly necessary to emphasize the needs of the body as regards iron. The entire metabolism depends on the amount of oxygen carried to the tissues and this in turn on the hemoglobin of the

blood; furthermore, with the woman the loss of considerable amounts of blood through the menstrual flow makes the presence of a normal amount of this element a vital necessity. It is interesting to note that in a recent communication McCollum⁽⁹⁾ has suggested that the vitamin E may play a similar rôle with the utilization of iron that the antirachitic (D) vitamin plays with calcium and phosphorus. Little is known in regard to the body requirements for iodine. It is known that the thyroid gland contains a small amount of this element and that thyroxin, the active principle in its secretion, also contains iodine in its molecule. Both over and under activity of the thyroid seem to be associated with low fecundity but, as I have stated, it is possible that this is a secondary rather than a primary result. It is known that swine in the regions where iodine is extremely low in the water and natural food stuffs may give birth to litters which are hairless and either stillborn or extremely weak. This condition is corrected by feeding the brood sow small amounts of iodine.

I wish finally to say a few words calling your attention to the importance of the vitamins in reproduction. Fat soluble A is absolutely necessary for growth, whether of the embryo, the nursing young or the young after weaning. The diet of the pregnant or the nursing mother must, therefore, be adequate in this regard. Similarly with water soluble B; but in addition we have the fact that adult males on a diet poor in this element develop testicular atrophy. Nothing specific is known about the antiscorbutic factor, but the importance of the antirachitic can hardly be exaggerated. This of course can be manufactured by the body in the presence of sunlight, but where the latter half of pregnancy occurs in the winter months a liberal supply of this vitamin must be present in the diet to insure the newborn baby against fetal rickets. The fifth vitamin E, and the last one about which we have any knowledge at the present time, is one described by Evans⁽¹⁰⁾ as a result of his study of the effect of different diets upon the oestrous cycle in the white rat. When this vitamin is absent pregnancy occurs, but always the fetus undergoes absorption after about 2

weeks. Males, when submitted to a diet in which this factor is absent, develop testicular atrophy just as they do in the absence of water soluble B.

Let me now round out the subject by reviewing the foods in which we may find the various dietary elements which I have indicated as necessary and then outline quite roughly the sort of diet which will contain them all in about the proper proportions. For reproduction those proteins are best which are chiefly of animal origin: namely, meat, fish, eggs and milk. The source of the fats and carbohydrates is immaterial provided the fats contain the necessary vitamins. Calcium and phosphorus are found most abundantly in milk and cheese. It is true that in producing this milk the cow gets the calcium from the vegetable kingdom, but it would be difficult for a human being to get the necessary amount (which is about 1 gm. per day in pregnancy) without drinking milk. Iron is found most abundantly in liver but there is a considerable amount in any red raw meat. There is a little found in eggs and still smaller proportion in spinach and certain other vegetables. Near the sea coast, iodine is found in the soil and hence in the drink water and vegetables. There are certain large regions in the country which have been recently glaciated, or which are mountainous, where iodine is entirely absent in the soil, hence it is not possible to rely on the iodine in vegetables alone. All sea foods, such as fish, are however, relatively rich in iodine and form the best source for this element in the diet. Even in goiter regions and where fresh fish cannot be obtained it is possible to use canned fish to meet the iodine lack. The A vitamin is abundant in butter if the cows have been on a proper ration. It is also found in the germ of grains and in leafy vegetables. The B vitamin is widely distributed but occurs in the germ of grains, in meat, milk, yeast, etc. The antiscorbutic vitamin (C) is present in the juice of citrus fruits and in raw vegetables. It is destroyed by cooking. The D vitamin is present to a slight extent in leafy vegetables and in butter fat. It is also found in the yolk of eggs but practically its chief source is sunlight or cod-liver

oil. This latter is also rich in vitamin A, but for some reason contains none of the other fat soluble vitamin (E), the so-called antisterility factor described by Evans⁽¹⁰⁾. This E vitamin is found in natural foodstuffs, particularly lettuce and the germ of grains. It is also found in alfalfa powder and to a slight extent in butter where the cows have been recently out at pasture.

Combining all these facts we may then say that a normal diet for reproduction should for an adult man of average weight at moderate activity contain 90 to 100 gm. of protein, 125 gm. of fat, 350 gm. of carbohydrate with a total of 3000 calories; and similarly for an adult woman the totals would be protein 90, fat 100, carbohydrate 330, calories 2600. To obtain these figures for the protein it is necessary to take 1 egg, a liberal helping of meat or fish, a whole grain cereal, and 3 glasses of milk a day, together with bread and vegetables. Three large pats of butter a day, cream and the fat of meat and eggs will supply enough fat to meet the requirements. The carbohydrate is easily supplied from cereal, bread, potato and vegetables. Three glasses of milk yield about 0.9 gm. of calcium, which is ample except under the extreme drain of pregnancy or lactation. Under these conditions the milk should be increased to 4 glasses a day. Phosphorus is found in liberal amounts in many foods so that with the diet as planned there is no danger of any lack. The iron required will be supplied by the meat, eggs, cereal and vegetables; the iodine will be amply taken care of if sea fish is substituted for meat once or twice a week. In addition to the egg, meat, fish and milk, a normal diet should contain fresh fruit, butter, a whole grain cereal and liberal amounts of vegetables. Some of the latter should be eaten raw in the form of a salad. The other vegetables should be chosen about equally from those which are green and those which are more starchy, such as the various root and seed vegetables. These last named substances will form an adequate source of all the necessary vitamins; the fat soluble A being found in butter, lettuce, and the germ of cereal grain; B in milk, meat and also in the cereal; C in fresh fruit; D in egg

yolk and to a slight extent in butter (though the main source of this will remain sunlight); and E in the lettuce. A typical day's menu producing approximately the number of grams of protein, fat and carbohydrate indicated and the total number of calories is given in Fig. 4.

In order to take such a diet without gaining weight there are several absolute rules. The first is that there must be no eating between meals of candy or other sweets or the constant taking of sweetened drinks. What desserts are taken must be figured so that they will not exceed the total calory allowance. If there is any danger of this, fresh fruit can always be substituted. The second requirement is that there must be sufficient exercise to burn up the carbohydrate and fat. I am assuming of course that we are dealing with an adult of normal weight and under average conditions.

When these dietary suggestions are used in the treatment of sterility the 2 common conditions which we meet, in the woman particularly, are over-weight, low protein, and low calories or under-weight and such an inability to digest the ordinary diet that, practically speaking, the same condition of low protein and low calories obtains. In dieting a woman who is over-weight the calories must be kept low until the weight gets within normal limits, but in doing this there must be an even higher protein content in the diet than is needed under normal conditions, or else the loss in weight will entail a loss of protein from the body which will have a very harmful effect upon fecundity. If the metabolism is low a little thyroid is exceedingly helpful in stimulating it, but it should be remembered that the normal stimulus of metabolism comes from exercise and if a woman is to remain strong and healthy during a strenuous period of dieting it is essential that she take a large amount of vigorous out-of-door exercise. When the weight has returned to normal the calories should gradually be raised to what has proved to be the proper standard for the average woman, and the amount of exercise taken should be regulated so that there is no gain in weight.

The problem of the under-weight woman of

low fertility is a rather different one. With her also there is apt to be a decreased metabolism because of the lowered protein intake and the low total calories. Some of these women apparently eat enough but because of ptosis are unable to digest what they eat. With them the problem is often one of sufficient rest to promote adequate digestion until the weight has been brought to normal, after which they also should be encouraged to exercise; furthermore, in order to make them gain, the total calories usually have to be increased out of proportion to the other elements for the time being.

The dietary management of pregnancy presents still another aspect of this problem considered in its broadest sense. Here there are several additional reasons for exercising the greatest care in regard to diet. Not only is the health of the mother directly involved but the growth and vitality of the baby depend in the most absolute fashion upon what the mother eats. There is also good reason to believe that very large babies may be prevented by avoiding an undue gain in weight on the part of the mother and that therefore the complications of pregnancy and labor are decidedly fewer. The pregnant patient should take what I have spoken of as the normal diet. In the nature of the case, particularly during the last trimester, the number of calories will have to be increased and during that same time a full quart of milk is necessary to supply the drain in calcium. If this is not done the mother's teeth are sure to suffer. When it is necessary to restrict meat it is often wise still further to increase the amount of milk. As has been mentioned, if the latter half of pregnancy falls in the time of year of little sun it is wise to take cod-liver oil. The chief way, however, in which diet must be managed is by the control of total calories to avoid an undue gain in weight. With a woman of normal weight, 15 lb. is enough to allow for an average size baby plus placenta, amniotic fluid and uterus. Occasionally patients will lose as much as 16 or 17 lb. after birth. Where the patient is as much as 15 lb. or more overweight to begin with it is possible by careful management of the calories, provided the pro-

tein, salts and vitamins are supplied in abundance, to restrict the diet in such a way that she will not gain weight in spite of a pregnancy. It is usually unwise for the patient to lose more than this would imply. If the patient begins pregnancy under weight it is often possible to get up to what would have been normal for her height and age plus the 15 lb. of the pregnancy at term.

In presenting this subject to you I have tried to set forth what seems to me conclusive evidence that changes in diet do have a very definite effect on reproduction. I have particularly called your attention to the very striking experiment which Dr. Benedict and his associates carried out on human beings, and I have described a class of sterile patients in whom to my mind the condition probably has a similar origin. I have said nothing about the large group of sterile patients of both sexes which exhibit the stigmas of under-development. I have a feeling, but in the nature of the case no proof, that this cause for sterility could often be prevented if the boys and girls were given proper food to insure normal growth during childhood and adolescence. In order that there might be no misunderstanding, I have given in detail what I believe to be the normal diet for fecundity and reproduction, and as far as possible in the time at my disposal have given my reasons for this belief. I have tried to show how such a diet should be prescribed. Finally I have said a few words about my personal methods of treating low fecundity associated with abnormalities of nutrition and of dieting during pregnancy.

In conclusion, I wish to make my position in regard to diet in sterility perfectly clear. With accurate diagnosis the hit or miss employment of diet may benefit health but is little likely to prove an efficient means of treating patients. When a careful diagnosis shows that one is dealing with a case of lowered fecundity, and there are at the same time dietary or nutritional abnormalities, diet is a most powerful aid in treatment, particularly when it is combined with other measures designed to promote health. In the field of prevention it is of even more general utility, but the one

thing that I want to emphasize again and again is that poor diet will always be reflected in lowered vitality and efficiency and that no one who is dealing with cases of sterility can afford to neglect the importance of these fundamental facts.

Fig. 2

Dietary Elements Essential for Reproduction

- (1) An adequate amount of readily digested protein which shall contain all the necessary amino-acids.
- (2) Sufficient mineral salts, particularly calcium, phosphorus, iron and iodine.
- (3) An abundance of vitamins.
- (4) An amount of food which when balanced by exercise will supply sufficient energy for growth or reproduction without the deposit of an undue amount of fat.
- (5) Plenty of water.

Fig. 3

Practical Essentials of a Human Dietary in Relation to Reproduction

- (1) Protein. Meat or fish once a day. 1 egg a day, and 3 to 4 glasses of milk.
- (2) Minerals. Calcium and phosphorus supplied in milk. Iron in red meat, liver, spinach and other vegetables. Iodine in sea fish or other sea foods.
- (3) Vitamins supplied in butter, whole grain products, yeast, fresh fruit, green vegetables, particularly salads, and cod liver oil (or sunlight).
- (4) Calories to be controlled by weight, metabolism and exercise.
- (5) Abundant water.

Fig. 4

A Typical Day's Diet

Breakfast.	P.	F.	C.	Cal.
Orange 1	1	0	20	96
Cereal 3 tbsp. (oatmeal)	13	12	33	300
Thin cream 3 tbsp.	3	15	3	159
Bread or toast 2 slices	6	0	32	160
Butter 1 pat	0	13	0	117
Egg 1	6	6	0	84
Sugar 1 tsp.	0	0	10	41
Coffee (for cream and sugar see above)	0	0	0	0
	29	46	98	957
Lunch.				
Salad vegetable lrg. portion	2	0	6	32
French dressing 2 tsp. oil	0	10	0	90
Bread 2 slices	6	0	32	160
Cheese cottage 2 tbsp.	18	1	4	100
Butter 1½ pats	0	20	0	175
Milk (whole) 1 glass	7	9	11	157
Fruit	1	0	40	176
	34	40	93	890
Dinner.				
Meat 1 slice (lean)	25	5	0	145
Potato 1	4	0	32	149
Vegetable 10% 3 tbsp.	1	0	7	32
Vegetable 5% 3 tbsp.	1	0	3	16
Bread 2 slices	6	0	32	160
Butter 1½ pat	0	20	0	175
Milk (whole) 1 glass	7	9	11	157
Dessert	4	12	54	352
	48	46	139	1186
Grand Total	111	132	330	3033

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TOXIC-PSYCHOSES

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Toxic-psychoses is a broad subject and the time allotted will not allow me to go into all details concerning it. I will refer only to a few subdivisions of the toxic-psychoses with somatic diseases.

The literature contains many references of a general kind to what is called "Toxic Factor" in the etiology of insanity, and to the type of confusional insanity. It is interesting to note that the French alienists more than 100 years ago entertained the idea that the primary cause of mental disorders was to be found in the visceral changes. Pinal, in 1809, wrote as follows: "It seems that the primitive seat of insanity is generally in the stomach and intestines, and it is from that center that the disorders of intelligence propagate themselves as by a species of irradiation".

Peterson states that twice as many are made insane by physical strain as by mental strain. Only lately have poisons, produced by disease in various parts of the body, by fermenting or putrefying substances in the alimentary tract and by some of the acute infectious fevers, taken a prominent place in the etiology of the psychoses.

We do not yet know how frequently auto-

intoxication from absorption of intestinal poisons determines insanity, but facts collected point to the origin of a considerable number of cases from this cause. They usually are of a depressed type, sometimes maniacal.

My main object in this paper, is to redirect attention to this important subject, to emphasize its importance in treatment, and to indicate the need for coördinated effort on modern lines in the routine investigation of mental disorders.

The National Committee of Mental Hygiene classifies the psychoses with somatic diseases or endogenous toxins, as follows:

Delirium with infectious disease; post infectious psychoses; exhaustion delirium; delirium of unknown origin; cardiorenal disease; disease of ductless glands; other diseases or conditions, such as gout, malaria, diabetes, gastro-intestinal disorder, rheumatic fever, pellagra, epidemic encephalitis.

Factors producing these psychotic states are: Resistance of the patient; degree of temperature elevation; virulence of the infecting organism.

The condition of instability and lack of resistance of the nervous system is the important factor; consequently, women and children develop infection psychoses more often than men. Slight temperature elevation will produce confusion and delirium in some, while others will not show mental symptoms even when the temperature is 104°. Infectious diseases with pus are more liable to cause mental symptoms. Generally speaking, the following symptoms are the more prominent in all of these psychoses: Headache, malaise, confusion delirium, carphologia and subsultus tendinum, transient hallucinations and changeable delusions, states of depression and excitement. When the fever rises, the mental symptoms are usually worse.

POSTINFECTIOUS PSYCHOSES

After the febrile state, we may have the following symptoms: Disorientation, confusion-delirium, dream-like states. Depression and apprehensions, occasional auditory hallucinations and delusions of persecution.

Physical asthenia and prostration are un-

doubtedly important factors in these conditions and differentiation from "exhaustion-deliria" must depend chiefly on the history and obviously close relationship to the preceding infectious disease. (Some patients who fail to recover show a peculiar mental enfeeblement). In this group should be classed the nonalcoholic Korsakoff's psychoses following an infectious disease like typhoid, influenza or septicemia.

EXHAUSTION-DELIRIA

The 2 theories advanced are: First, by Binswangen, that primary mental confusion is due to deficient cerebral nutrition brought about by the general exhaustion of the organism; second, by Kraepelin, that it is an intoxication psychosis, brought about by toxic substances acting upon the cerebral cells. In all the toxic psychoses, the clinical picture is one of confusional insanity either in mild or severe degree, since it is essentially the result of toxemia, but one in which 3 factors prevail—relaxation of the arterioles admitting blood to the brain, plus the toxemia and, in addition, overactivity of the ductless glands concerned in the antitoxic process.

Allow me to give you a word picture of puerperal psychosis which is illustrative of an exhaustive delirium or to be more exact, an infective-exhaustive psychosis. It is an accepted theory that a toxemia is the underlying cause of puerperal insanity in most cases. An underlying cause of the toxemia is exhaustion of the ductless glands, which are under stress during pregnancy, and the resulting deficient antitoxic power of the body fluids.

PUERPERAL PSYCHOSES

The mental disturbance during pregnancy takes forms that do not lend themselves well to classification. They are rather exaggerations or perversions of mental peculiarities or tendencies from which no one is free. An exaggerated melancholy, a condition of profound depression, is the most common and most likely to occur during the early months. These are probably due to anemia and malnutrition so common at this time. Stuporous and confusional states are less common and

occur at a later period of pregnancy. Toxemia plays some part in etiology. Maniacal conditions, rare. Most insanities of pregnancy, unless of hereditary origin, disappear shortly after delivery.

According to the teachings of modern psychiatry, there is no special type which is peculiar to pregnancy or the puerperium, nor is either of these a cause of mental disease. Either, however, may be the occasion of the lighting up of some smoldering neuropathic tendency.

Some morbid psychosis* occurs in 7% of puerperal cases; the number originating during pregnancy being somewhat less. In fact, if we exclude some minor disturbances, which could be classified but are passed over as moods and eccentricities, and the length of pregnancy compared to the short puerperal period, we will find that mental disturbance is very much more frequent during the puerperium than during the months preceding delivery. The infective exhaustive psychosis is the most frequent, and the prominent type of infective psychosis is febrile delirium. The delirium is usually brief, follows the febrile movement, and differs little except in degree from ordinary fever delirium.* It is important to remember that the fever of infection is not often accompanied by delirium, at least in its early stages.

Next in order come 2 well defined psychoses, which may either follow the form just mentioned, or develop independently as the result of exhaustion.

These are collapse delirium and acute confusional insanity; the 2 together forming exhaustion delirium. Collapse delirium may follow difficult labor, unusual loss of blood, or severe mental shock. It is characterized by acute onset, mild confusion, profound clouding of consciousness, complete disorientation, dreamy illusions, hallucinations and delusions. The course is rapid, 1 to 2 weeks, and recovery the rule. Defective heredity is present in about one-half the cases. A similar condition sometimes follows eclampsia. Here we might call it a toxic exhaustive psychosis. I

think that febrile delirium and collapse delirium are important and will have come under our observation since they generally occur shortly after delivery. Mistakes in diagnosis and errors in treatment will be averted if we keep in mind the above psychoses. Acute confusional insanity develops later, as the result of exhaustion plus the anemia of lactation, and lasts for some months. Prognosis favorable. Majority recover in from 6 weeks to 6 months. A large proportion, about 50%, of the mental disturbances that complicate the puerperal period are of the stuporous type.

The strain of labor is too much for many nervous systems and prolonged painful labor, without infection, will explain some cases of puerperal insanity. Transitory mental aberrations during the agony of the second stage are often noted. Asylums show 10 to 18% of the female inmates affected at the puerperium and lactation. Example of a case: Mrs. H. C., aged 27, confined 6 weeks before, brought to hospital 3 days after confinement, had puerperal fever lasting 1 week. When fever subsided she seemed well mentally. Two days later, 12 days after confinement, she began to show signs of insanity.

Excited, obscene, religious, occasionally sleepless. Imagined she was wealthy but had no fixed or continued delusion. Day after entering hospital was noisy and destructive. Illogical remarks. Given elimination and supportive treatment. Discharged 3 months later as recovered.

I wish to make a few remarks about lethargic encephalitis or "nona" as it was called in the epidemic of 1890 in Italy. Numerous observations have been recorded in medical literature on the acute manifestations of epidemic encephalitis, but the late after-effects, especially those of a psychotic nature, have rarely been described. Gillespie, of Scotland, and of Johns Hopkins University, states that there is a tendency among writers on this disease to divide them into psychotic and neurologic, according to the predominating features. Hohman, reports 23 cases most of which were observed in the acute stages, but some of them

ran a chronic course. He summarizes and distinguishes 9 syndromes which he considers characteristic: (a) great pressure of talk without distortion of stream of talk or without mood alteration, persisting, in 1 case, for 5 months; (b) euphoria, persisting, in 1 case for more than a year after onset; (c) alertness and mental clearness immediately on arousal; (d) delirium; (e) stupor; (f) behavior oddities; (g) depression; (h) emotional instability and irritation; (i) memory defects. Of these, (c), (d) and (e) were found only in the acute stages. The others occurred in the chronic cases.

Mingazzini divides the illness into 3 phases—prodromal, hyperkinetic and lethargic. He characterizes the lethargic stage as a pseudostupor and not a true coma, as in this period there are often hallucinations of sight and hearing, but of no effect. Delirium is often present, and catatonia, *flexibilitas cerea* and catalepsy are the terms he uses to distinguish the motor anomalies in the lethargic stage. Recovery from the latter is often slow, and symptoms remain that are slow in disappearing; these are *adynamia* and *apathy*, which may develop sufficiently to be pronounced *neurasthenia* or *melancholia*. *Mannerisms* and inverted sleep rhythm are also sequels.

Davis and Kirby usefully attempt to discriminate the principal mental reactions occurring in the disease. They point out that in epidemic encephalitis we are dealing, in all probability, with a toxic-infective agent, and they accordingly adopt Hoch's classification of mental reaction types, as follows:

(1) Organic reactions, characterized essentially by impairment of apprehension, interference with elaboration of apprehension, defects in orientation and retention, difficulty in activity of memory, with variability in mental capacity and level of attention, the so-called mental defective. It is now established that this reaction is seen only when the brain has been damaged, temporarily or permanently, including injury by a toxic-infectious agent.

(2) Affective reactions, characterized by emotional disturbance following essentially the

pattern of the normal defective states. Typical examples are the manic depressive oscillation and other benign and emotional disorders.

(3) Trend reactions, characterized by normal trends and ideas, an unusual attitude toward the outside world, with constitutional peculiarities and psychogenic mechanisms in the foreground. Examples are schizophrenic and paranoid states.

It is added that the common symptoms are drowsiness and delirium, that trend reactions are rare after the sensorium has cleared; but that, on the other hand, a peculiar affective state is liable to persist after the disappearance of all the other mental symptoms.

Grossman, in a reëxamination of 89 cases from 6 months to 2 years after the onset of illness, found irritability and depression to be the most frequent disturbances; in a few cases an euphoric state was present and a number showed compulsion or feared neurosis. Changes in disposition and disturbances of memory and reason were also remarked.

At least half the cases described showed an organic reaction (delirium); the most common psychic residuum is an emotional alteration. This seems, at first, to be in contrast to the finding of Davis and Kirby who consider that the psychiatric problem of epidemic encephalitis lies essentially in the realm of the organic reaction types. But the statement refers only to the earlier stages; and a survey of their 18 cases seems to show that in only 3 were organic reactions present in the chronic stage; the authors themselves remark that the striking feature in all 15 cases that did not recover was a change in the emotional reactions. This is in accord with observations made in the present series. In view of the grave disability existing in many of the patients, it is natural to ask whether the emotional change may not be more apparent than real; whether there is not a loss of showing affect rather than an emotional deterioration. This was not borne out by the present inquiry; some of the patients confessed to a feeling of contentment, others to actual well-

being, or even happiness, and in them all there was a strange lack of anxiety as to the outcome of their illness, amounting indeed to a lack of insight.

The most common affective disorder is an apathy varying in degree with an accompanying depression in some cases, in others with a feeling of contentment or well-being. Kirby and Davis point out that negativist features are rare in encephalitis and that the stupor of encephalitis has nothing to do with the characteristics of catatonic stupor.

The mental state, the content of the mind and the conduct exhibited by the organism may be taken as the total reaction of the organism to the particular environmental circumstances of the moment. As an interesting example of the essential difference between forms of the psychoses, I would like to refer to 2 cases of acute maniacal excitement which came under my observation almost simultaneously. The patients were both men of about 40 years of age, and the psychoses were the first attack in each instance. Both were men of considerable intellectual ability and had obtained considerable distinction in their different walks of life. One of them was keenly interested in theology and the other in psychoanalysis. The life experience of the two differed widely, save that they both had adopted professions where their natural egotism, which was strongly in evidence, could be sublimated in themselves and in the interference with the affairs of others. Except for minor variations in the intensity and extent of the hallucinations, the 2 psychoses ran almost identical courses, and both patients eventually recovered the conventional inhibitions which permitted their return to their careers. Neither had any insight into the nature and extent of his mental disturbance, and each was inclined to be intolerant of the steps which had been rendered necessary and which had been taken in order to secure adequate and proper care and treatment during the illness.

Without going into any further details of the clinical course of maniacal excitement with recovery, I will come to the point of interest which I wish to bring to your notice, and which arose during the convalescence. I put it to each patient, if he did not consider that he was suffering from a psychosis, what, then was the meaning of his extraordinary conduct? The theologian replied that he had been having the most wonderful and inspiring experience, for which he felt nothing but gratitude and from which he had derived much benefit; our view as regards his conduct was quite wrong and unjustified, the whole explanation being that he had actually been in the presence of God. The other patient replied in practically the same terms; he was very pleased with himself, his experience had been both interesting and instructive, he intended to go thoroughly into all the details with us because he was sure that we were on the wrong track, and his newly acquired knowledge would throw a great light on obscure and disputable matters. He insisted that there had never been anything radically wrong with him, save perhaps that he had been rather run down beforehand, and the solution of the whole matter was that he had been living in the subconscious mind. Here the form of the disorder was the same; it might be described as a wish fulfilment, but the mental content, which gave the meaning to the behavior was entirely different in each case, and was determined by the experience of life under which the dominating sentiment had been built up.

From investigation of many and varied cases of many mental disorders from the psychologic point of view, the conclusion to which one is driven, is that the psychologic analysis will never do more than give us an insight of the mental content, such matters as the form of the disorder, the mental state, the temperament and character, for all these are the same order of phenomena and are dependent on determinants which are inaccessible to psychologic approach.

THE TREATMENT OF ARTERIAL HYPERTENSION IN WOMEN BY URETERAL CATHETERIZATION AND THE APPLICATION OF MEDICAMENTS TO THE RENAL PELVIS
(Preliminary Report)

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The science of medicine has made rapid strides during the past decades, but the etiology of arterial hypertension and a rational mode of treatment which will yield permanent results in the reduction and maintenance of blood pressure at a so-called "normal physiologic level" are still unsolved problems.

Undoubtedly, foci of infection in the teeth, tonsils, and nasal sinuses, play a prominent rôle in the causation of hypertension. Probably some cases originate from endocrine disturbances, others from poisons of metabolic origin, and recently a number of observers have suggested that hypertension is the result of pathologic alteration in the kidney. Barton, writing in the *West London Medical Journal*; 32:14, 1927, states his conviction that the section on urology will eventually solve the problem or contribute the principal work on hypertension.

Some physicians believe that no type of treatment of essential hypertension is of permanent value; others maintain that lowering the pressure may be harmful; while another group emphasizes the efficacy of a meat-free diet, extensive removal of all possible foci of infection, colonic irrigations, long periods of rest, salt-free diet, and use of nitrites. My purpose in this paper is to demonstrate that in many cases the hypertension can be reduced to normal, or nearly so, rendering the patient clinically free of the troublesome symptoms; that patients with a known pressure of 200/120, embracing a period of 4-5 years, can tol-

erate the pressure being lowered to 140 or less without harmful effects; and that a dietary regimen of abstinence from meats and salt-free food is not always essential.

In view of the fact that the number of cases studied for this presentation is small, and not consciously selected, it may be argued that they are insufficient upon which to base definite clinicopathologic conclusions; hence the context of this paper is offered as a preliminary report. The appended case reports include instances of both chronic pyelitis and chronic pyelonephritis, associated with arterial hypertension in women. I do not treat male patients.

CASE REPORTS

Case 1. E. B., aged 62, single, chief complaints, dizziness, headache, frontal and parietal, marked edema of ankles and hands, shortness of breath, and bladder symptoms (consisting of frequency and dysuria) for 12 years. Known blood pressure of 250/120 for a period of 4 years. Because of the bladder symptoms, a cystoscopic examination was made, with the following findings: Bladder capacity diminished, contour irregular, mucous membrane hyperemic, and a patch of cystitis cystica on the trigone. Both ureteral orifices were congested and dilated. An indigocarmin test was done, the dye being eliminated from the right ureteral orifice in 10 and from the left in 15 minutes. The patient was dyspneic and the cystoscopic examination was done with difficulty. The bladder was irrigated with normal solution, and oil of cajeput in sterile olive oil was instilled thrice weekly until the local symptoms subsided, after which the ureters were catheterized. Urinalysis showed turbidity with a flocculent sediment. The specimen from the right kidney contained albumin, many epithelial cells, pus cells and bacteria; the left side was similarly involved, plus albumin. A culture disclosed the presence of colon bacilli.

The ureters were catheterized 5 times on the left side and 4 on the right. After each catheterization neosilvol was instilled into the renal pelvis. After these treatments, the

blood pressure was 117/84. Since that time the headache and dizziness have subsided. Dyspnea is no longer present, an indigocarmine test repeated at the completion of the treatment showed elimination from the right kidney in 6 and from the left kidney in 7 minutes. The patient received no other therapy. No internal medication was prescribed nor was the diet restricted. Her pressure has now remained about 120/84 for a period of 4 months.

Case 2. Mrs. W., aged 52, married, menopause 4 years ago, rather obese. Chief complaints; dizziness and aural tinnitus of 6 years duration, following an attack of influenza. Hysterectomy for fibroid 4 years ago. Blood pressure 220/116 at the time of her first visit. Cystoscopic examination showed a diminished bladder capacity, and a moderate cystitis cystica, with both ureteral orifices congested, elevated and dilated. The ureters were catheterized and some resistance was encountered in passing a No. 5 catheter on each side. The renal pelves were evidently dilated, as approximately 60 c.c. of urine was drained from each side before the flow became normally intermittent. Analysis of the urine revealed turbidity, albumin, many epithelial cells and pus cells. Bacillus coli was found in the culture. On June 2, 1927, the blood pressure was 160/90, the dizziness had disappeared, and the tinnitus lessened. July 7, 1927, blood pressure 124/80; ureters catheterized and neosilvol instillations in both renal pelves. At this time, while out of the city, the patient went in bathing and developed an acute exacerbation with chills and fever. She was treated by another physician for acute pyelitis. On my return the blood pressure was reading 146/92. The ureters were again catheterized twice at weekly intervals. Urine cultures became negative and the blood pressure dropped to 128/82.

This case exemplifies a chronic pyelitis producing hypertension, which was reduced although urine was not free from colon bacilli. The patient later developed an acute exacerbation of the chronic process with a coincident rise in blood pressure, which was relieved by 2 local treatments.

Case 3. Mrs. M., aged 56, obese, menopause at 47. Chief complaints: high blood pressure, above 200 for 3 years, neuritis and macular fasciitis, edema of ankles and legs, dyspneic, frequency of micturition, frontal headache, and nocturia for 6 years. Blood pressure August 13, 200/120.

Treatment: Catheterization of both ureters, specimen from each renal pelvis turbid, albumin, occasional casts, and many epithelial cells; culture showed colon bacilli. Blood pressure August 15, 160/90; ureteral catheterizations, both sides, and neosilvol instillations into renal pelvis. Blood pressure August 31, 138/78; ureteral catheterizations. Blood pressure September 2, 130/78; culture, Bacillus coli. Blood pressure September 15, 136/76; culture positive for same organism. No turbidity, few small flakes in "urine body".

Case 4. Miss J., aged 56, menopause, obese, high blood pressure for 3 years, varying between 190/110 and 200/120. Urinary frequency for 4 years, with headache and dizziness. Intravesical irrigations had been given for 2½ years without marked improvement. The right ureter was catheterized and the patient promptly developed an acute exacerbation of a chronic pyelitis. She was confined to bed for a period of 2 weeks, with a temperature of 102°-104°. After the acute symptoms subsided, the blood pressure was 139/90. After an indigocarmine test the dye was eliminated on the right side in 11 and on the left in 7 minutes. The patient was given weekly catheterizations for a period of 2 months. The urine is still slightly turbid, there are a few pus cells in the specimen, and the culture is positive for Bacillus coli. The pressure remains about 140/84, and the general condition is very much improved.

Case 5. Mrs. B., aged 36, para 2. Chief complaints: Dizziness, frontal headache, recurrent vomiting for 1 to 2 days every 3 weeks for past 12 years; menstrual history normal. There is a definite previous history of pyelitis, with exacerbations during her first pregnancy. Blood pressure 156/96 on first examination. Cystoscopic examination: slight congestion of the mucous membrane of bladder; right ureteral orifice congested and di-

lated. Ureteral catheterization at weekly intervals was done for 4 weeks. First specimen of urine from right kidney showed albumin, occasional casts, many epithelial cells, pus cells and bacteria. The culture was positive for colon bacilli. The blood pressure after treatment was 124/82. The urine contained no casts or albumin, but the culture was not free from bacteria. Treatment stopped June 1, 1927.

Since the original treatments, the patient has had 1 or 2 mild attacks of headache. The blood pressure has become stabilized at 120/80, and remained so up to the present time. No culture of the urine was made but, microscopically, there was no evidence of infection.

Case 6. Mrs. B., aged 69. Chief complaints: Dizziness, headache, visual disturbances; history of 4 apoplectic strokes during the past 7 years. Patient now has hemiplegia of the left side, dysuria and urinary frequency, and blood pressure has varied between 162 and 220 for several years. One year ago I took a blood pressure reading and found it 190/100. Urinalysis at various times showed albumin, casts, bacteria and epithelial cells. Positive culture of *Bacillus coli*.

Treatment: catheterization of both the ureters and neosilvol instillations into the renal pelvis. A pressure reading was taken 5 days after treatment and was found to be 124/64. Two months later the pressure was 116/62.

Case 7. Mrs. H., aged 54, para 6. Gives a history of bladder frequency and dysuria for a period of 10 years. Known blood pressure above 200 for a period of 5 years. Patient has been treated for recurring cystitis in various hospitals over the above period of time, with only temporary improvement. Both ureters catheterized; urine was found to be turbid, contained albumin, many epithelial cells, pus cells, bacteria and a few casts. Culture positive for colon bacilli. This patient has been given ureteral catheterizations at 5 day intervals, and her pressure reading is now 162/78.

At the present time I have 8 additional cases of hypertension undergoing treatment, and a more elaborate report will be made at a future time. Incidentally, however, all of

these cases have shown a reduction in their blood pressure as a result of ureteral catheterization and therapy. It is not at all unusual in patients with hypertension to find the systolic pressure has dropped 40-50 mm., and diastolic pressure 15-30 points after the first treatment. In some cases occasional exacerbations may occur until the urine yields a negative culture, with a systolic pressure rise of 15-20 mm., but under persistent treatment the pressure will drop to the original level and remain there. None of the patients mentioned in this report were given internal medication or subjected to dietary restrictions.

CONCLUSION

1. A pyelitis or pyelonephritis may be one of the foci of infection in the causation of arterial hypertension.

2. Frequently the onset of the hypertension is precipitated by an acute pyelitis becoming chronic. When untreated, this eventually gives rise to a moderate impairment of renal function with arterial hypertension.

3. The degree of hypertension may depend upon the amount of inflammatory involvement of the renal pelvis as evidenced by the indigocarmin function test.

4. A chronic pyelitis may be an etiologic factor in cases of migraine.

5. Arterial hypertension can be reduced in some patients by means of ureteral catheterization and therapy.

SYMPOSIUM ON PHYSICAL EXAMINATIONS IN INDUSTRY

(Read at the Joint Meeting of the Association of Industrial Physicians and Surgeons of Northern New Jersey, and the Employment Managers' Group at Newark, New Jersey, June 3, 1927.)

I. REASONS FOR PRE-EMPLOYMENT EXAMINATIONS

E. C. JACKSON, M. D.,
General Electric Company.

Preemployment examinations are finding their way into industry more and more every year, which would lead us to conclude that they

have a definite place in factory management, bear a definite relationship to personnel welfare, and are significant in the results obtained. Industry spends large sums of money yearly for the inspection and maintenance of expensive complicated machinery, because it is considered good business and sound policy not to wait until the machine wears out, but rather to periodically inspect the machine and its operation. It is just as good business to check up and maintain *human* machines, for they pay a far larger return on investment in upkeep than the most complicated piece of ordinary handmade machinery. The mechanical machine broken down or worn out can be repaired and parts can be replaced, but this is not the case with the human machine. Physical health is man's greatest asset, and if this be true individually, it must be more so collectively. Thus the physical (and mental) health of the employé is reflected in the strength and well-being of the entire working force. Capitalizing the individual's physical health in industry, therefore, becomes a matter of great economic and social consequence.

Examinations tend to minimize discontent; the well man is happiest. They minimize unrest and turnover. They save in wages and sickness, thereby cutting down the increase in production cost. Waste is eliminated to a marked degree; labor turnover and absenteeism are decreased and labor efficiency is increased.

Examinations decrease potential causes of disease. They result in a decrease of the number of accidents, reduce the number of injuries and prevent them from becoming more serious than they are. The well man is not nearly as likely to become the victim of an accident as is the sick man whose mind is given over to his physical condition time and again. Examinations decrease the loss of working power and prevent overwork. They control contagion in a well regulated health examination plan, reduce the hazards of occupation and the resulting sickness and cost to the employer and employé.

Payment to the employé for disability in case of accident during employment is provided by the **State Compensation Laws. The**

calendars of the Compensation Courts are filled with claims disputed by the insurance companies, employers and employés. Examinations prior to employment will reduce the possibility of unjust sickness and accident claims against the company and at the same time aim to give the employé a square deal.

Finally, examinations permit the proper placement of the employé. Not all employés are fitted for the type of work for which they may be applying. By proper selection according to physical fitness much can be done to properly place the employé, with the resultant reduction in discontent and unrest and increased interest in the work.

II. HOW SHOULD PHYSICAL EXAMINATIONS BE DONE

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The Clark Thread Company.

The examination should be made by a doctor and nurse. A complete physical examination is desirable, in order that a false sense of security may not be engendered by a partial examination which fails to reveal some hidden defect.

If the employé is approached tactfully, and in a matter-of-fact way, he will take the examination for granted, and seldom offer any objection. Those who do object are almost invariably the ones who desire to hide some infirmity which the examination would expose.

The skin should be carefully inspected for excessive oiliness, dryness, rashes or sores.

The eyes should be examined for both near and distant vision, using a standard chart in a darkened room, with a constant source of illumination.

The hearing should be tested, and for this purpose a dollar Ingersol watch is quite satisfactory.

The condition of the teeth and tonsils should be carefully noted, as infections about the teeth and in the throat play a most vital part in the health of our workers.

The heart and lungs should be examined, both by percussion and auscultation, with the clothing removed.

The blood pressure should be noted in both its systolic and diastolic phases.

The abdomen should be examined with the patient lying on a cot or examining bed. The examiner should look for any areas of increased tenderness which would denote underlying disease, or for any abnormal masses, or abnormalities in position and size of the intra-abdominal organs.

The genitals should be observed, and the employé examined for hernia. I do not believe that it is desirable to attempt to perform a vaginal examination on employés unless there be some definite indication of internal trouble.

The reflexes should be tested in order to determine the nervous stability of the patient.

The lower legs in the region of the ankles and the front of the shinbone should be examined for swelling or dropsical condition.

The arches should be examined with the patient standing barefooted and the weight borne equally upon both feet.

The posture and mobility of the spine should be observed.

The patient should then be required to walk away from the observer, turn about quickly, and walk back, so that impairment of gait may be noticed.

The hands should be examined with the fingers extended, and then clinched as in a tight fist.

The flexibility of the elbow and shoulder joints should then be carefully examined, as limitation of motion in the upper extremities is frequently found.

In special cases, this type of physical examination will need to be supplemented by urine analyses and blood tests.

During the examination, the ability of the employé to understand and coöperate is observed.

A careful record of all findings should be kept, both for follow-up purposes and for the company's protection in case of future claims for disability.

III. THE DOCTOR'S PLACE IN FINAL PLACEMENT

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Medical Director New Jersey Rehabilitation Clinic

The selection of work according to the physical qualifications of an applicant is one of the most logical business reasons which can be advanced for physical examinations. Every efficiency engineer appreciates the value of placing round pegs in round holes. No method is complete that does not include a physical examination.

The physical characteristics such as may be noted in the height and weight and their relative values are often an index to the type of work an individual can do. The relation between the standing and seated height is known as the thoracic coefficient. If it falls below .52 it indicates a feeble constitution. Likewise the morphologic coefficient, the ratio between height and weight, indicates a feeble constitution if it falls below .360, one therefore in which heavy or protracted work is contraindicated. Though these values are not absolute, they have proven of sufficient value in the work of placement to warrant their use.

The general form of a person's body is also a guide to the type of employment he may undertake. The man who is built like a jockey is the last person any of you would hire for a piano mover.

In general, there are 4 classifications of physique.

First is the robust type. He is the type of man most of you hire for heavy labor. He has a large frame; particularly, broad shoulders and a big chest. He can carry heavy loads for long periods but not very quickly.

The second is the digestive type, also of large frame but not so well developed in the shoulders and chest, who eats a great deal and works slowly for long periods.

The third type classified as muscular is best exemplified by the athlete with his symmetric development, who works quickly for short periods only.

The fourth type we classify as the cerebral or nervous type. You know him as the smallish man, sometimes with a large skull, who is always on the go, a veritable dynamo who can accomplish great mental tasks as well as lighter manual tasks quickly and for long periods because of the excellent coordination of his physical and mental faculties.

Besides the physical qualities, the mental qualities are of extreme importance. The employment manager is as a rule a pretty good practical psychologist. Nevertheless, the physician can detect mental conditions not apparent to the employment man.

The physicians look for the following things:

First, the general intelligence of the man. He is not interested in a lot of ultrascientific or psychologic tests which, as a rule, are not significant. What he wants to know is his general intelligence; is it below average, average, or above average? He can tell that in 10 minutes conversation.

Secondly, he wants to know what his reaction time is. This is the great personal equation that makes for differences in human beings. He is not interested in the exact reaction time; that interval of time it takes for an individual to respond to a stimulus. He wants to know whether it is fast or slow. Men with slow reaction time should not work near machinery.

It is important to know if the applicant is stable emotionally. If he is temperamental, he may not fit into the job despite good trade qualifications. If he is ambitious and optimistic, he will give value received to the plant that hires him. If, on the other hand he is depressed and sulky he is not the type of man you want in your plant.

Finally, if the man is physically handicapped, the physicians can tell you the limitations of his capabilities and the contraindication for his employment. Three things in general should be considered in fitting the disabled to proper work:

- (1) The nature of the man's disability.
- (2) The previous training and occupation.
- (3) The selection of the occupation in the industry for which the above findings fit him.

It is surprising what the handicapped person can do. We are endowed with a superfluity of material to carry on the routine pursuits of life. We have 2 arms and 2 eyes. Many get along with one. We have 2 lungs yet we can live with a quarter of a lung. All the extra material nature gave us is for emergency use. We call it the safety factor.

In the same way there are 20 or more occupations or vocations that man is suited for by virtue of his physical and mental resources. If he chooses one of the 20 he will be successful and happy. It is the task of the physician to assist the employment manager to analyze the physical and mental fitness of the patient, and recommend such general employment as may fall in the group of those qualities exhibited by the applicant.

IV. RE-EXAMINATIONS

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Production is affected in direct proportion to the degree of contentment of the workers. Contentment is dependent to a large degree upon good health, suitable work for the individual and pleasant surroundings.

Upon entrance to employment the candidate is examined. To be of the most value both to the man himself and the company, this examination should be thorough.

Reexaminations should be governed largely by the findings at the time of the initial examination. If a sufficiently thorough examination is made upon entrance to employment, a basis for comparison is established for subsequent examinations. The real question is not as to whether subsequent examinations should be made, but rather how frequently they should be made.

In cases of known or suspected abnormalities, it is obvious that the frequency of examination will be governed by the nature of the disability. In such cases, examinations should be made sufficiently often to keep informed as to changes of the condition. Examination

once a year is quite generally advocated for employé's supposedly in average normal health.

Returns in one form or another for the expense incurred are of vital interest.

What does a system of annual examinations cost?

Percentage increase in staff.

Percentage increase in equipment.

Percentage increase in clerical force.

Time spent off job by employé's and computed cost in wages.

Slowing up of production.

Increased overhead.

Advantages gained:

Increased morale.

Protection against development of disease not easily recognizable; (a) prolongs life and period of earning capacity; (b) guards against continuance at work not suited to individual.

Production increased.

Usefulness prolonged.

The applicant is examined with particular reference to the work contemplated and is qualified or not on this basis. Upon transfer to another department or to work of a different character within the department, an examination should be made to determine physical fitness of the employé for such work. To continue an employé on a job for which he is physically unsuited oftentimes increases physical limitations and may lead to disabilities even permanent in character. Such a circumstance is a menace to the health of the individual, lowers his morale and greatly impairs his productive efficiency.

In nearly all plants, especially the larger ones, there are certain jobs that are known to be a menace to the health of the worker. In such work, the physical conditions of the job are studied and all possible protection of a mechanical and physical nature is instituted, but the personnel managers have not completed their job until they have enlisted the services of the Plant Physician in determining the health hazard of the job. Physical examination should be made by the Plant Physician, be thorough in character, and should be repeated at such intervals of time as to make certain of the early detection of changes in

the physical condition of the employé which would indicate an unfavorable effect of the work on the health of the individual.

It is very difficult and probably impossible to measure in money the advantages of a well-organized system of reexamination of employé's. Much depends upon the ability of the physician to apply his professional knowledge to the particular problem and the ability to combine good business judgment with professional service.

While the economics of physical reexamination, conducted on a basis of abstract considerations, may be open to debate, I am convinced that examinations for the purpose of preventing misfits on the job with consequent impaired efficiency, and protection from impairment of the health, from exposure to jobs in which there are recognized hazards, are sound economic undertakings.

V. THE RELATION OF THE DOCTOR AND THE EMPLOYMENT MANAGER TO THE EMPLOYE

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Let's see what's going to happen to the employé after all of the preliminaries, including medical inspection, also examination, both mental and physical, prove to be satisfactory. The individual is hired, and who can say how long a time will elapse before the same individual is fired, or perhaps be given another trial or different kind of work; or say a probationary period is arranged or he is told, perhaps, that the kind of work he was hired to do has been completed and if he is wanted again he will be sent for, and while waiting in vain to be recalled or rehired he gets another job and possibly has to go again through the same trials and difficulties; or perhaps he finally lands a job for which he is fitted, and makes good; in other words, finally, the square peg has gotten into the square hole, whereas,

previously the round peg was trying to fit the square hole.

In these days, when pressure, exerted from every direction, is strong and powerful, the doctor has of necessity to keep in the pink of condition, and is required to watch the intake and outgo, have a quick discerning eye, good hearing, skilled tactile sense, a steady nerve, a good impulse control, a good working conscience, excellent character, and above all things good common horse sense. The doctor must see many things that the average individual knows nothing about; this is due in part to his long years of training, in addition to his natural intuition or instinctive ability. Also, to be successful in this kind of work, in his relation to the employé, the doctor must be cautious, careful, kind, thoughtful, and, outside of his diagnostic ability, should be a good practical psychologist, friend, counsellor, medical advisor, philosopher, diplomat and indeed in cases, he is practically father-confessor.

These are only a few of the things that the doctor must be, and now what qualifications should the employing officer possess, in his attitude or relation to the employé?

In the first place, he must know what is required to be done in the office or around the shop, factory or other place, where the person selected must fill the job or position. His job is a big one and he shouldn't select Tom, Dick, Harry, Sally or Jennie to fill the job, then "pass the buck", so to speak, to the doctor and expect him to be infallible or to be able to give the employé common sense, if the employé wasn't born with it.

Team-work should be the slogan. What game can be played successfully to win unless there is team-work to the nth degree?

The employment manager should be guarded as to word of mouth to persons he refers to the doctor, and, in my opinion, should never refer a case with the words—"Well, I think so and so; see what the doctor thinks". The psychology of the human naturally runs along the line of least resistance, and if the employment manager tells the employés that in his opinion they are sick, no matter how much psychology or treatment the doctor may use,

he or she will, in the case of a good malingerer, give the doctor some trouble at first. The manager in referring the case should telephone his opinion, send a written opinion, or see the doctor personally, if he knows facts, or has data in the case that the doctor should know; and the doctor should reciprocate to the practical advantage of the company, with the exception that he should handle delicate personal matters the same as in private practice. The employment manager does not need to know such data. What he wants is a practical common sense medical opinion, put into terms of a practical everyday *workable* business opinion.

The employment manager should be business-like, but at the same time be kind, courteous and tactful when necessary. I'll admit that in some cases and in some jobs the only expressions that make the employé feel that he should be up and doing and be on the job are those where strong adjectives are used; this usually applies only to the illiterate; but the employment manager of a first-class business house, firm, company or corporation can teach those under him that to control others you must first learn to control yourself.

It would take too long to enumerate all of the ins and outs of the various jobs or positions. They will on reflection, I'm sure, occur to those present who handle such work, but I am quite sure that, in the long run, if you will put yourself in the other fellow's place and talk any given or reasonable problem over with the employé along the line I have mentioned, he or she will meet you more than half way.

I have been able to recover or salvage, so to speak, those who had one foot in the office and the other in the street, including all grades of cases in between, where the executive in charge of the employment bureau, the office supervisor, manager or head of department, his assistant and so on down the line, were through, and wanted to fire the employé in question.

The employment manager and doctor can so work together that there is no religion or missionary more altruistic than that of the Great Teacher who said, "Inasmuch as ye did

it unto one of the least of these, ye did it unto Me". And a poor, down-trodden soul, who is trying to make good in spite of a terrible handicap, no matter from what cause, should be given a chance to make good.

If after reasonable work along this line, the employment manager and the doctor find it is futile or useless to continue, then you know that you did what you could, and that's all we can really do in this world—try to be of service to the other fellow.

THE LABORATORY DIAGNOSIS OF SYPHILIS BY DARKFIELD EXAMINATION

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The primary sore of syphilis usually does not appear until about 3 weeks after the infecting contact. A sore which appears a few days after contact is unlikely to be syphilitic, as the *Treponema pallidum* is a very close observer of its custom of multiplying so slowly as to produce no visible sore for about 3 weeks. A sore may, however, appear even as soon as a day after contact because of some other infection; this sore in a few weeks may be diagnosed as syphilitic, as syphilis may be acquired at the same time as chancroid or some trivial infection which appears sooner. Because these physical appearances of the chancre, which at one time were thought never to fail, have been found so unreliable, it is modern practice to make no diagnosis without a darkfield microscopic examination.

Darkfield work may be learned without difficulty by anyone familiar with microscopic procedure, but a diagnosis should not be made without a little practice. Some of the various makeshifts such as silver stains, Giemsa stains, India-ink methods, and many paraboloid condensers (especially the Army Medical School model, as made by the Spencer Lens Com-

pany), may be useful as emergency measures in distant stations, but should not be employed in civilized populous communities where there is satisfactory equipment in the hands of an experienced person usually within a radius of 50 miles.

The most useful period for the darkfield examination is during the fourth, fifth, and sixth weeks after the infecting contact i. e., during the first 3 weeks after appearance of the chancre. At this time, the microscope with darkfield illumination usually shows great numbers of spirochetes in the expressed serum, but during the fourth week they are liable to be seen in slightly smaller numbers and, as a rule, it becomes progressively more difficult to demonstrate the germs of syphilis in the sore after the fourth week.

The Wassermann reaction should be strongly positive after the third week of the sore, so this test will then prevent any failure to recognize the disease when the spirochetes are not found.

Darkfield examination of the glands draining the sore will often show spirochetes when they may not be demonstrated in the sore. The glands are not always examined by gland puncture in a busy free clinic, because of the slight extra time consumed in this procedure and because the Wassermann test is so reliable after the third week of the sore. Occasionally, gland puncture will save a few days diagnostic delay, because some one may have applied some chemical or drug to the sore before it is seen by a diagnostician. Diagnostic delay may be avoided also in atypical cases of secondary syphilis, as spirochetes may be found by a darkfield examination of serum from mucous patches or from the deeper layers of the skin lesions.

The obtaining of serum from these sores for darkfield examination is not a painful procedure. Even when it is necessary to use a hypodermic needle and syringe to obtain material from a gland, the pain is little more than that caused by an ordinary hypodermic injection. Cocain, procain, or any other local anesthetic must not be used, as such drug may make the spirochetes more difficult to recognize.

OBTAINING SPIROCHETES FROM THE SORE

No treatment should have been given to the sore before the examination. If any drugs have been applied previously, the sore should be well cleaned with tap water. Various antiseptic applications may make finding of the spirochetes more difficult, but sometimes even after much antisepsis the spirochetes are easily found. The spirochetes are often easily found by aspiration of the base, when they have disappeared from the surface. Aspiration is performed by injecting about 3 drops of sterile water into the indurated part of the sore and aspirating strongly with a small syringe, as in obtaining spirochetes from a gland. If antiseptics have been applied and spirochetes are not found, the patient should thoroughly remove any remaining drug by frequent washings with clean water (or by keeping the sore moist with a wet dressing) and return for another darkfield examination in 1-3 days.

After the sore has been cleaned by the patient with tap water, it should be cleaned again by rather rough friction with dry paper towelling, blotting paper or gauze. The patient should then squeeze the sore at the base and serum will ooze out. A rather dirty sore may be cleaned better by gentle scraping with a knife. It is best not to have too much blood in the specimen, so, if there is any bleeding the blood should be wiped away before collecting the specimen.

The margin of the sore is the best place to scrape as the spirochetes are most abundant in serum from the inflamed edge. In the lesions of secondary syphilis also, the margins of the syphilides are the best places to obtain the serum for examination.

OBTAINING THE SPIROCHETES FROM A GLAND

Gland puncture to obtain serum for darkfield examination may be desirable because of negative findings in a suspicious sore. Darkfield examination of the sore is particularly liable to fail to show spirochetes if the sore has been present more than 3 weeks or if it has been treated with drugs, or if the sore has healed or cannot be seen. The skin over the gland is sterilized by alcohol. A 1½ inch 20 gauge needle is attached to a small syringe

containing 0.2 c.c. of sterile distilled water. The point of the needle is passed through the skin into the center of the enlarged lymph-node. The water is injected into the center of the gland, which is held rigid with the tip of the needle in the gland while the rear end of the syringe is moved about. This motion gently macerates the center of the gland with the point of the needle and mixes the water with the gland substance. Suction is made with the piston to obtain the fluid mixture, and the needle is withdrawn. The small amount of fluid from the gland is usually only enough to fill the needle.

This serum is squirted out on the slide and examined for spirochetes. Extreme care must be used by the operator to avoid pricking himself or anyone else with the needle. As soon as the serum is removed, the needle and syringe should be dropped into a vessel for boiling.

MICROSCOPIC DARKFIELD TECHNIC

It is most important to have a good apparatus, and it is next in importance to know how to use it. With good lighting effects it should not be difficult for an amateur to recognize *Treponema pallidum*, but some of the poorer types of apparatus, such as many of the substage combined lights and paraboloid condensers, make the work difficult even for an expert. An expert can often find spirochetes with a microscope without a darkfield condenser, but he would not attempt to name the types of spirochetes without the proper apparatus, just as an expert syphilologist would not attempt to diagnose primary syphilis without a darkfield examination or in some cases a Wassermann.

The cardioid (hemispheric) is the best type of condenser as it gives the best darkfield. The paraboloid condensers give too little light to the spirochetes and too much to the background which should be dark for contrast. The change-over condenser, which furnishes either a poor darkfield or a poor brightfield, is useful in some biologic research but should never be sold for routine clinical use. The Army Medical School model is a paraboloid and the worst of all condensers. The new Zeiss cardioid condenser has a centering de-

vice which works more smoothly than the older type which used 2 screws working against a spring. This new type consists of a cardioid condenser mounted eccentrically in a rotating collar which is itself eccentrically mounted in another collar. This form of mounting gives great rigidity and smoothness of adjustment. The substage of the microscope should be quite rigid and move vertically by a rack and pinion. Then, when once adjusted to give the best darkfield, the condenser and substage collars can have that position marked by deep scratches which form a line or plane perpendicular to all the various collars. Then all that is necessary for centering, if the condenser has been removed, is to make the scratches coincide when the apparatus is put together again. The slides should be from 1.17 to 1.2 mm. in thickness so that the condenser can be racked all the way up and be in almost the proper position without other adjustment. The ordinary, somewhat cheaper, quick screw substage carrier is too unsteady for rapid work. An excellent apparatus is only slightly more expensive than a poor one, and any slight saving in first cost will be a source of continuous regret when the darkfield is used. What I have found to be a suitable combination is the Zeiss double eccentric cardioid condenser fitted to a Zeiss stand which has a rack and pinion substage.

The objective may be an achromatic oil immersion objective 90X n. ap. 1.25 (1/12) with iris diaphragm or, better, an apochromatic oil immersion objective 60X n. ap. 1. If the microscope is to be used also for smears for gonococci, it should be equipped with the ordinary Abbé condenser and the objective should be the 90X with iris diaphragm, which is suitable for both darkfield and brightfield work. In large clinics the darkfield microscope should be kept set up ready for darkfield use and not used for other purposes.

The binocular ("Bitukni") attachment which inclines the line of vision from the vertical allows the microscopist to sit in a comfortable upright position and is very useful where many hours are to be spent at the microscope. If continuous (direct) current

is available, a micro arc lamp with clockfeed gives the brightest light. The simple and in-



A binocular attachment which prevents backstrain

expensive electric microscope filament lamp of Zeiss is, however, suitable for all ordinary darkfield work and with an appropriate bulb may be used with any current.

A microscope caliper, such as the Brown and Sharp instrument with ratchet stop, No. 11 RS, metric measure, in leather case, should be available for measuring the thickness of microscope slides and cover glasses. The microscope slides should be of the specified thickness or slightly less. The Zeiss cardioid condenser requires slides no thicker than 1.2 mm. Some firms stock darkfield slides of 1.45 mm. thickness only and supply them to purchasers of cardioid condensers. These thick slides cannot be used except with the inefficient paraboloid condensers. Slides thicker than 1.2 mm. cannot be used. Slides thinner than 1.15 mm. are not advisable because the extra space between the bottom of the slide and the condenser will take more immersion oil, causing greater difficulty in focusing and

permitting more room for interfering bubbles and other foreign substances in the extra oil required.

Both slides and cover glass should be new and free from scratches, bubbles or corrosion and well polished to make them perfectly transparent. As suggested by Stitt, a paste of "Bon Ami" and water is smeared over the slides and cover glasses and then they are stored with the powder over them. Before use they should be polished, washed and dried.

Crystal clear immersion oil must be applied to the under side of the slide to make optical contact with the top of the condenser, just as the oil is used on the top of the cover glass for contact with the oil immersion objective. Bubbles are to be avoided as far as possible, as they will diffuse the light and may spoil the darkfield.

When a darkfield examination is to be made, the microscopic apparatus should be gotten ready, as far as possible, before obtaining the serum. At least 2 slides and cover glasses should be cleaned and polished to dryness. Each cover glass should be held lightly in the split end of a small wooden applicator, matchstick, or toothpick. The serum is transferred to the slide from the sore with the aid of a wire loop or a capillary pipet, or the sore is so manipulated that the cover glass (held at the end of the stick) can be touched to the top of the drop of serum oozing from the suspected lesion. Then this cover glass with the wet side down is placed on a clean slide with great rapidity to prevent drying of the minute amount of serum. The improvised wooden forceps is removed by using a pair of slivers or matchsticks like a fork with a prong on either side of the applicator which is drawn off the cover glass. To ensure a thin layer of serum, the cover glass may be gently pressed down on the slide with the end of a matchstick.

Too much blood in the serum will scatter the light and make the spirochetes less visible, but a few blood cells are desirable. A preparation should not be made when the serum is distinctly bloody, but the sore should be gently blotted dry and later specimens will contain few blood cells.

A drop of oil is applied to the upper side of the condenser, to the under side of the slide and to the upper side of the cover glass. The slide is placed on the stage and the condenser is racked up until it almost touches the slide. If the condenser has been centered previously and the position marked with scratches, and if the positions of the light and microscope are marked on the table, it is a simple matter to put them back in the same relative positions, to adjust the plane mirror, to stop the objective down all the way with the iris diaphragm, to focus down with the objective, and to readjust the mirror, thereby obtaining a perfect darkfield.

Centering the condenser the first time, after placing the slide on the stage, is most easily done if a low power dry objective is used with a low power eyepiece, 4X. The mirror is adjusted so that the light image is as nearly circular as possible or makes a symmetric figure. Then the centering collars are adjusted to bring this symmetric figure to the center of the field. Slight further adjustments of the mirror, collars, and substage rack and pinion are made until there is a symmetric central bright spot. Then the positions of the various parts may be marked by a scratch running over the condenser collars and the substage to indicate the best adjustment. Marks are made also on the table to indicate the best position of the light and microscope for future use. It is more satisfactory however to adjust the lighting each time with the aid of the low power objective and eyepiece. Manufacturers of darkfield apparatus supply special directions for their particular instruments, and these special directions should be followed carefully to obtain the best results.

TREPONEMA PALLIDUM

The *Treponema pallidum* is a thin motile spiral organism with a diameter of about $\frac{1}{4}$ micron across its body and about 2 microns across the spirals. It is from 4 to 24 microns long, the length usually being greater than the diameter of a red blood cell and some specimens twice that diameter usually can be found. There are 7 to 8 spirals (complete turns) to that part of its length equal to the

diameter of a red blood cell. It appears like an extremely long corkscrew and moves with a screwing motion.

The important distinguishing features are: the *Treponema pallidum* usually maintains its form like a tightly coiled stiff spring—the longer specimens frequently bend sharply in the middle but this angling is usually slight and consists of a gentle swaying motion; the coils are fairly tightly fixed as the organism usually does not uncoil and wriggle unless it becomes tangled with some obstruction; the organism is quite symmetric from end to end, all coils (except at the extreme tip which is slightly pointed) being of the same size and appearing like a combination of complete semicircles, instead of the various irregular combinations of third and quarter circles of the refringens and other loosely wound spirochetes. The *Treponema pallidum* resembles a coiled spring, instead of having the snaky appearance of most spirochetes. If the suspected organism vibrates rapidly throughout its length without moving from its position, like a bird wildly flapping its wings while fastened to its perch, it is not *Treponema pallidum*.

If spirochetes have been found which resemble *Treponema pallidum*, but are not characteristic, a second preparation should be made with extreme care to clean the sore and the surrounding area thoroughly so that there is no superficial contamination. Then the serum oozing from the deeper part of the sore is very unlikely to contain any of the simulating spirochetes.

In the examination of any sore, except in the mouth, there is little danger of a mistaken diagnosis even by an amateur, if he is at all careful.

NONSYPHILITIC SPIROCHETES

Spirocheta microdentium is the organism most liable to be mistaken for the spirochete of syphilis; it is found commonly between the teeth and in the mouth. It is only about one-half as long and one-half as thick as the *Treponema pallidum*, and its curves are slightly shallower.

Spirocheta refringens, which is frequently found on the surface of dirty sores, will not

be found if the sore is properly cleaned. It does not remain coiled but continually uncoils, comes to rest, gives a wriggle and coils and moves about and then uncoils and rests a moment. Its movements are violent, and irregular. It is coarser, and its curves are fewer and more open and irregular than those of *Treponema pallidum*. With a good darkfield apparatus, these large coarse spirochetes show a double contour like 2 spirals laid almost parallel but meeting at their ends, whereas *Treponema pallidum* always appears as a single bright spiral line.

Treponema pertenuis is the cause of yaws and is almost identical in appearance with *Treponema pallidum*. Yaws, however, is a disease of the tropics and it needs the same remedies as syphilis, so workers in New Jersey need not concern themselves with this spirochete.

SUMMARY

A positive diagnosis of syphilis during the first 2 weeks of the sore can be made only by microscopic examination.

Have a good cardioid condenser on a rigid substage illuminated by a strong steady light. Know how to use the apparatus and have all major adjustments made before collecting the specimen.

Obtain the serum from the depths of the sore by thoroughly cleaning it or by aspiration with a syringe and needle.

Make the diagnosis only when the spirochete is rigid, is longer than the diameter of a red blood cell, and looks like a long stiff coiled spring which does not uncoil to wriggle and flap.

EPIDEMIC ENCEPHALITIS

A Clinical study of 100 cases analyzing the symptoms and physical signs and the analysis of the sequels in 116 patients examined from 1 to 3 years after the acute infection.

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The epidemic appearance of an unusual dis-

ease that affects the central nervous system profoundly has during the past 10 years been the subject of much inquiry throughout various parts of the world. Acute epidemic encephalitis was first intensely studied in Austria and Australia where it appeared in 1917. Von Economo reported a number of cases that appeared in Vienna in apparently epidemic proportions; these cases were characterized by prodromal symptoms of nasopharyngitis, headache, fever, nausea and vomiting, and somnolence which ended after a few weeks or months. In addition to these symptoms, he found evidence of involvement of some of the cranial nerves manifested by ptosis, ophthalmoplegia, and facial paralysis which indicated that the pathologic process was localized in the brain. In addition to the involvement of the isolated nuclei in the bulb, there were in some instances other signs of cerebral involvement, such as tremor and ataxia, which suggested disturbance in cerebellar function. He called the disease "encephalitis lethargica".

In August, 1917, Burnell reported some cases from Australia which began abruptly with convulsions, and in which lethargy was a constant feature. At about this time similar cases were being investigated in England and France. In England, the disease was first reported by Harris and Hall as toxic ophthalmoplegia; they thought they were dealing with isolated cases of food poisoning due to the bacillus botulinus. At about this time I reported a case of poliomyelitis which I also thought was due to botulism. In England the matter was taken in hand by the government, and a commission was appointed to investigate the nature and cause of the disease. This investigation was completed in 1918 and it was concluded that botulism was not the cause of this disease. Evidence was also brought forward against its similarity to poliomyelitis on clinical (MacNalty), epidemiologic, (James), experimental (McIntosh), and pathologic grounds (Marinesco).

In the United States the disease was discussed by many investigators. A committee was appointed by the New York Neurologic Society to study the disease and this committee suggested "polioencephalitis" as the most

acceptable name because the brain was affected in almost all cases and involvement of the nuclei in the bulb dominated the clinical picture. It was pathologically and experimentally established that epidemic poliomyelitis was a distinct disease; reasons were cited which would seem to indicate that there was no direct connection between influenza and the epidemic of poliomyelitis. As to the clinical manifestations, syndromes of all kinds could be established, depending on localization of the process in the central nervous system. This encephalitis was of an infectious nature, the infection originating in the nasopharynx proceeding by way of the lymph stream to the basilar cerebral vessels, and then spreading through the brain stem, ganglions and cortex. The cord, meninges, posterior ganglions, and nerve fibers may be involved.

Etiology. Various organisms have been reported as the cause of epidemic encephalitis, but as yet no uniformity of opinion has been reached. Loewe and Strauss have brought forth evidence to show that epidemic encephalitis is due to a filtrable virus. They produced the typical clinical and pathologic pictures of the disease in monkeys and rabbits by inoculation of Berkefeld filtrates of macerated brain and nasopharyngeal mucous membrane from fatal cases. Inoculations with cerebrospinal fluid and nasopharyngeal washings also gave positive results. These experiments have been confirmed by Levanditi and Harvier, McIntosh and Turnbull, Thalheimer, and other observers, all of whom concur in the belief that a filtrable virus is the cause of the disease.

Pathology. The most constant findings reported macroscopically in necropsied cases have been congestion and edema of the brain and the meninges, with minute hemorrhages most numerous in the brain stem, basal ganglions, and centrum ovale. Microscopically, there is an infiltration of the adventitial and perivascular spaces with lymphocytes and plasma cells. These perivascular rings occurring especially in the nuclei of the brain stem have been considered almost pathognomonic. In the basal ganglions and the cranial nerve

nuclei, the vessels may stand out sharply differentiated from the surrounding tissue by the ring of nuclei about a distended vessel lumen.

Symptoms. For the purpose of practically illustrating the clinical manifestations of encephalitis, I have selected 100 typical cases that we observed during the acute state of illness; 50 of these are children and 50 are adults, and represent a cross section of the various types of the disease that came under our observation since the onset of the epidemic in 1918. I have analyzed critically the symptoms and signs presented by both groups in order to see if there were any striking differences and also to try to establish a minimum basis for the diagnosis of epidemic encephalitis.

Among the adults, the sex incidence was about equal. Their ages varied between 18 and 53 years. Headache was the most common complaint; it was present in 31 of the 50 patients. The headache was severe, constant, and localized in the frontal or occipital region of the skull. It was the first symptom, either alone or in association with some other symptom, in 28 cases. The mental state was clouded in 40 patients, in 8 of whom delirium was present. Lethargy was present in most of the cases; it varied from slight to marked states, and was characterized by the fact that the patient when roused would soon drop back to his lethargic state disregarding whatever was being done to him. Two complained of insomnia, and 3 others showed either a manic or depressed state. The delirium clinically resembled that seen in typhoid states. The psychosis did not differ materially from the ordinary clinical psychotic types.

Fever was present in 27 cases; it was 100° or less in 5, and varied between 100° and 103° in the remaining 22. Diplopia occurred in 23 cases; it was the first symptom noted in 8; it varied from transient attacks in some, to persistent diplopia in others, with the images usually side by side. Fifteen complained of root pains; in 3 this was the first symptom; the pain was usually described as being severe and neuralgic in character. In a number of the patients where the pain was in the abdo-

men, an intra-abdominal surgical condition was for a time suspected. Several of these patients were saved from an unnecessary operative procedure by the presence of myoclonic movements of the abdominal wall. Fourteen patients had during some stage of the illness disturbance in their bladder functions; the usual complaint being difficulty or inability to start the urinary stream.

Eight patients vomited and 4 complained of severe vertigo. Two patients began with paresthesia, one of the face and the other in the right arm. Only 1 of the adults had convulsions; a 17 year old girl who for three days had shown signs of a mild attack of encephalitis, on the evening of the fourth day was suddenly seized with a generalized convulsion, and had 7 similar attacks that night; she then went into status epilepticus and remained in that state for the next 3 days during which time she had 126 convulsive seizures; when in a moribund state her convulsions ceased and, curiously, she made a complete recovery.

Objective Signs. The ocular manifestations were the most constant. Ptosis of one or both lids was present in 31 patients; in 14 the pupils were unequal and sluggish in their reaction to light, and in another patient the pupils were fixed to light. Twenty-eight showed involvement of the extra-ocular muscles; in 25 of these the external rectus was involved and in 3 others the internal rectus was affected. Fourteen had nystagmus, which was most frequently present in the horizontal plane. Faulty innervation of the facial muscles was noted in 28 cases; most of these were of the supranuclear type. Clinical evidence of involvement of the meninges was present in 16 cases; the neck rigidity and Kernig sign varied in intensity in the individual cases. Seven others showed involvement of other cranial nerves; 5 of these had disturbance of the tongue and palate innervation and 2 showed paralysis of the left vocal cord.

Weakness of the extremities was noted in 12 cases. The deep reflexes were altered in 24 cases; in 11 they were more active on one side than on the other; in 9 they were diminished or absent, and in 4 they were markedly

increased on both sides. In 5 the abdominal reflexes were absent, and a Babinski response was elicited in 10 cases.

Disturbance in coördination was present in 8 cases; 5 of these showed choreiform movements, and 3 ataxia in the upper or lower extremities. Myoclonic movements were noted in 10 patients; these were present in the muscles of the extremities and the abdominal wall. Difficulty of bladder function was present in 14 patients; catheterization was often necessary to relieve this symptom. In 2 patients a macular papular eruption over the body and the extremities was noted. Eleven patients had a tremor of the hands resembling that seen in paralysis agitans.

The white blood cells were counted in 33 cases; in 19 of these the cell count was below 10,000; in 11 others the count was between 10,000 and 15,000, in the remaining 3 it was over 15,000. The spinal fluid was examined in 40 cases; in 21 the pressure was moderately and in 7 others markedly increased. The cell count was below 10 in 17 cases, between 10 and 20 in 5, between 20 and 50 in 5 others, and in the remaining 6 there was a cell count of over 100 per c.c., 2 of these being over 1000.

Among the 50 children, there were 32 males and 18 females. Their ages varied between 14 months and 15 years; 34 were below the age of 10 years. The most frequent subjective complaint among the children was headache; it was present in 33 cases, and in 25 it was the first symptom of the disease in association with fever and drowsiness. Drowsiness was present in 42 cases, in 7 of which delirium was also present; in 4 cases there was in addition insomnia; 2 patients showed a manic state and 1 other was markedly depressed. Fever was present in 32 patients; in 26 of these it varied between 100° and 104°; in the remaining 6 it was below 100°. Diplopia was present in 10 cases; only 4 of these were among the younger patients. Twelve complained of radicular pains, which in 5 was the first symptom noted. Bladder disturbance was present in 9 and was the first symptom noted in only 1 case. Generalized convulsions were present in 8 patients. Nausea and

vomiting were present in only 4 of these patients.

Objective Signs. The ocular signs here, too, were the most constant. Ptosis was present in 18 cases; 10 showed unequal pupils, 7 of which reacted sluggishly to light; 2 others showed fixed pupils. Paresis of the extraocular muscles was present in 24 cases; 21 of these affected one or both external recti, and in 3 the internal rectus muscle. Fifteen showed nystagmus; which was usually present in the horizontal planes. Facial weakness of the supranuclear type was present in 20 cases; in 1 it was peripheral in type and was the first symptom of the disease. Ten showed weakness of the extremities and in 2 of those with a right hemiplegia aphasia was also present. The deep reflexes were disturbed in 18 cases; in 8 of these they were diminished or absent; in 6 they were hyperactive, while in 4 others they were unequal in their activity. The abdominal reflexes were absent in 5 cases, and 11 showed a Babinski response which was bilateral in 7. Meningeal signs were present in 20 cases.

Coördination was disturbed in 6 patients; 5 of these had choreiform movements and 1 had ataxia of the extremities. Tremor of the hands was noted in 13 patients; here too it resembled that seen in paralysis agitans. None showed myoclonic movements. A rash was present in 4 cases.

The white cell count was done in 27 cases; in 10 patients it was below 10,000; in 11 others it was between 10,000 and 15,000; and in 5 it was between 15,000 and 20,000; only 1 had a cell count of over 20,000. A lumbar puncture was done in 34 cases; in 15 the pressure was moderately and in 10 markedly increased; in the remaining 9 it was normal. In 8 cases the cell count was below 10; in 7 cases between 10 and 20; in 6 others between 20 and 50; in 5 between 50 and 100, and in the remaining 8 it was over 100 cells per c.c. The highest count was 180.

A critical analysis of the subjective complaints and the objective findings in the 2 groups of cases shows a fairly close parallelism in the findings. The more frequent occurrence of convulsions, higher fever, drowsi-

ness, and evidence of meningeal irritation, in the group of children with this acute inflammatory process in the brain is just what one would logically expect to find in such cases. There are no other distinctive features between the groups. The diagnosis of epidemic encephalitis is warranted when a child presents symptoms of drowsiness, headache, fever, and diplopia, coming on acutely with or without convulsions, and shows evidence pointing to focal involvement of the brain stem, particularly of the eye muscle nuclei; when these symptoms and signs are associated with tremor, choreiform movements, signs of meningeal irritation, radicular pains, or disturbance in the bladder functions, the diagnosis is fairly certain.

Sequels. For a study of the sequels I have selected 116 patients all of whom we observed throughout the acute stage of their illness. These patients were then reexamined at intervals from 1 to 3 years following their acute illness. Among the 116 there is one group of 86 patients, largely adults, and a second group of 30, all children. I thought that one could best stress the various type of sequels by the analysis of 2 such groups. In the first group of 86 patients, 10 were found to be free from organic signs and had no subjective complaints at the time of reexamination; 14 others were in a stationary condition but showed residual signs of their infection; the remaining 62 patients showed evidence of a progressive involvement of the central nervous system—42 of these showing the clinical syndrome of paralysis agitans. In addition to this syndrome residual signs of involvement of the cranial nerves were frequently present. The facial innervation was disturbed in 27 cases; the type of disturbance was usually supranuclear. Two of these had in addition a tic of the facial muscles. Fourteen showed weakness of the internal or the external recti. The pupils were unequal in 17 cases; in 4 of these the response to light was sluggish on both sides; in 3 others the pupil was fixed on one side and sluggish on the other; 2 showed Argyll-Robertson pupils, and in another the light response was present but the response to

convergence was absent. The deep reflexes were disturbed in 35 cases; in 13 they were unequal; in 11 they were extremely active and in 9 moderately active, while in the remaining 2 they were absent. The abdominal reflexes were hyperactive in 31 cases; they were unequally active in 2. Babinski response was elicited in 7 patients.

Many showed some disturbance in their automatic functions; blueness and coldness of the hands and feet and excessive sweating were frequent complaints. Flushing and vasomotor instability and in one case difficulty in urination was present; another patient had intense sexual desire but found his power diminished when he attempted coitus. Inversion of the sleep mechanism was a common complaint. Thirteen patients had gained excessively in weight; this varied between 15 and 95 pounds.

Perhaps the most interesting sequels were those affecting the psychic sphere; psychoneurosis, compulsion and fear states, conduct and behavior disturbances, and complete change in the personality of the individual were often present. Actual psychoses were less frequently encountered. Seven patients were despondent and complained of marked depression. Failing memory and lack of interest for current events was frequently noted. Most of the patients seemed to dread the night. Two patients were afraid to stay in the house alone; one would not ride in a car or train because she was afraid that it would get beyond the motorman's control; another could not control his thoughts which were always morbid; still another could not overcome the impulse to steal when it overtook him; he was convicted for stealing letters from a letter-box but was released on parole when his condition was recognized. He realized the gravity of his offense and admitted the moral wrong but stated that he took things on the impulse of the moment as he could not control his actions.

Among the other 20 progressive cases similar disturbances of the psychic state were noted; 3 of them showed choreiform movements, and 1 had a tossing tic of the head;

another had a clinical syndrome typically like that seen in dystonia musculorum deformans; 3 showed a clinical picture simulating myasthenia gravis, and 2 patients had disseminated lesions which produced a clinical picture of multiple sclerosis.

Among the second group of 30 children, only 4 were found to be free from residual signs but they showed disturbance in their psychic functions. There were 8 others who were apparently stationary but showed residual signs of involvement of the cranial nerves and psychic changes. The remaining 18 all showed the paralysis agitans syndrome; 16 were fairly complete, and showed beside the tremor, loss of associated movements, and the typical speech, attitude and gait seen in paralysis agitans; the other 2 showed incomplete syndrome.

Facial asymmetry was noted in 20 cases, and 3 of these had in addition tic of the facial muscles. The pupils were unequal and sluggish in their response to light in 7 patients; another had bilateral Argyll-Robertson pupil, and still another had a pupil that did not respond to either light or convergence. Six showed ptosis of one or both lids, and 7 had weakness in the extra-ocular muscles. The deep reflexes were unequally active in 3 cases; they were markedly increased in 3 others; the abdominal reflexes were hyperactive in 4, and a Babinski response was elicited in 5 cases, in 2 of which it was bilateral.

Among the autonomic functions the following disturbances were noted. Ten patients showed inversion of the sleep mechanism; these patients were unable to sleep at night but could and would sleep throughout the day. One, with a very rigid parkinsonian state, who never spoke or moved throughout the day would leave her bed during the night and circulate through the ward taking food and toys from the table of the other children. A striking gain in weight was noted in 8 cases; this varied from 17 to 50 pounds. In these patients other evidence of pituitary dysfunction was not uncommonly found. Disturbance in bladder function was noted in only 1 patient.

Disturbance in the psychic sphere was present in practically every case. Striking changes were noted in 15 of the patients. In 12 of these there was complete change of personality of the individual; children who before their illness were well behaved, bright, sociable, and well adapted to their environment, became unmanageable, quarrelsome, irritable, and otherwise disturbed in their behavior. Their school work deteriorated and their attention became poor or was entirely lacking. In only 1 case, unfortunately, was the reverse observed. Two children in addition began to lie and steal, and another developed a typical hypomanic state. Various forms of neurosis, especially fear states were developed by many of these children; they were afraid to be left alone, but did not know what they feared. In company with other children they were irritable, quarrelsome and nonadaptable. The literature abounds with reports of the most bizarre psychic states that have followed encephalitis in children. In a recent report (*Am. J. Psychiat.*, July, 1926) on postencephalitic behavior disturbances in children, Bond and Partridge "feel certain that the behavior disturbances they noted in the children at the Pennsylvania Hospital have an organic basis, and that they are modified by personality elements and environmental factors. There had been no evidence of progression in these children in the course of one year, and they responded well to simple methods of discipline. They also felt that the group had been manageable as a unit, and that as a whole it had made fair progress in education, with definite improvement in behavior". The psychic cases that we have under observation did not show this tendency to improve but they were cases that had not been removed from their home environment. The few patients who were observed in the wards of Mount Sinai and Montefiore Hospitals with behavior disturbances were not kept long enough to show any material change in their condition. The experience of the above authors is extremely important and indicates the most logical method, to my mind, in treating the

conduct and behavior disorders, following encephalitis.

Among other sequels we have observed a number of cases of persistent choreiform and in 3 cases the development of tic movements. We have also seen a number of cases of dystonia musculorum deformans following encephalitis. One of our patients showed a typical dystonia of the neck muscles when he first came under observation and later developed a typical parkinsonian syndrome with disappearance of his dystonia. None of these patients have shown any tendency to improve. Among the less common sequels mention must be made of the cardiac and respiratory disturbances that one occasionally encounters. We had 3 cases of epilepsy develop among the adults, but curiously none were noted among the children.

Comparison of the frequency and the various types of sequels observed in the 2 groups of cases shows no essential differences. The one exception seems to be that in children the psyche is more constantly and profoundly affected.

Treatment. As yet there is no specific treatment for the disease. During the acute stage feeding and the general care of the patient offer at times perplexing problems. The injection of some form of foreign protein has been advanced. At first the intramuscular injection of Aolin, a milk protein, was used with the hope of forestalling the occurrence of sequels. In my experience this as well as all other forms of treatment, had no perceptible effect in preventing sequels.

Another form of foreign protein that was used was typhoid vaccine injected intravenously. The smallest dose that would produce a fever reaction was used; and the injection was repeated every other day with a quantity of vaccine sufficient to produce a brisk reaction. With this therapy I have seen a number of cases that looked extremely hopeless clinically recover from their acute attack. In the chronic stages of the disease, typhoid vaccine injections have given relief from the rigidity and tremor in some of the cases with park-

insonian syndrome; how lasting this relief will be is still undetermined.

Those with psychosis, and children with marked conduct and behavior disorders, are best cared for in institutions where discipline and reëducation can be rigidly supervised. I have had 2 patients under my observation who have made suicidal attempts while in a depressed state. Two others, young girls, have become immoral, probably due to the psychic disturbances following their acute illness.

In a number of patients with choreiform and tic movements I have effected some improvement with graded coördinated movements preceded by relaxation exercises. The relaxation is taught by means of passive movements applied in a systematic way to the muscles about each joint. The diaphragmatic type of breathing is used. The exercises are of the simplest kind and should never be done to the extent of tiring the patient. They should be done for 15 to 20 minutes at a time and at least three times a day.

For treatment of patients with the paralysis agitans syndrome, warm baths and the administration of 1/100 gr. of hyoscin hydrobromide 3 or 4 times a day seems to have given the best results in relieving the tremor and rigidity.

Hall has used the tincture of belladonna in doses of from 10 to 30 drops 3 times a day with good results in controlling the sallorrhea and other parkinsonian symptoms. Intraspinial injection of autoserum and the injection of 1/30 gr. of nicotin 3 times a day have been used but we have had no experience with these methods.

The mortality among the acute cases varied between 10 and 15% during the different periods of the epidemic. The prognosis should always be a guarded one. The outlook for patients who develop the progressive forms of sequels is not very hopeful. Our institutions for the care of patients with chronic diseases and those caring for mental cases are crowded with patients suffering from the sequels of encephalitis and so far very few have shown any tendency to improve; on the contrary the majority have become progressively worse.

THE TREATMENT OF RINGWORM OF THE SCALP BY THALLIUM ACETATE EPILATION

S. OLEYNICK, M. D.,

Newark and Elizabeth, N. J.

Ringworm of the scalp, which is due to infection by a group of fungi comprising various species of trichophytons, is a parasitic dermatosis most commonly found in children, rarely in adults. Difficulty in obtaining a complete cure is a subject much discussed in dermatology, and the condition presents a social problem of vast importance; particularly if the infection is carried into public schools, asylums, or hospital wards.

Freund, in 1897, was the first to advocate the use of x-rays to produce alopecia for the cure of ringworm; his technic at that time was in an experimental stage and permanent alopecia sometimes resulted. Great progress has been achieved by introduction of more accurate measurements of x-ray dosage since Sabourand and Noire suggested their pastille method. Epilation by x-rays has been the method of choice up to the present time in the treatment of ringworm of the scalp, but accurate dosage, dependable instrumentarium, and thorough familiarity with the technic are indispensable in order to obtain a temporary and even alopecia. The possibility of injury to bone development in very young children has been stressed by some authors, although no definite proof has been offered for this contention.

A great practical difficulty in the use of x-rays is found in the timidity and restlessness of children who are apt to be injured by the high tension current; which necessitates the use of special devices for fixation of their heads. In feeble-minded children it has even been found necessary to administer an anesthetic, as done by Felden in New York City Children's Hospital.

The interest of dermatologists has been aroused recently by favorable reports in the literature concerning a method to produce alopecia by means of a drug, thallium acetate,

taken internally. Thallium was once used internally to reduce the night sweats of tuberculous patients and about the year 1900 mention was made of a by-effect, consisting in the production of alopecia. Sabourand, whose attention was aroused by this occurrence, attempted to use the thallium therapeutically in the treatment of ringworm, but because of the irregular results and serious toxic symptoms, such as cyanosis, tachycardia, purpura hemorrhagica, he abandoned the method. Buschke devoted years to accurate study of the physiologic and pharmacologic action of thallium, in his extensive laboratory experiments on animals; he could with regularity produce alopecia in mice, rabbits and guinea-pigs, but also saw other interesting phenomena, such as the production of disturbances in bone development similar to rickets, decreased sexual activity, atrophy of the sexual glands, and cataract. He assumes that the alopecia is produced by a disturbance of the endocrine sympathetic system, particularly by a damaging influence to those branches of the sympathicus which supply the nutrition of the scalp.

In human beings, thallium was first successfully used on a larger scale by Cicero and Peter, in Mexico City, in the treatment of ringworm. They could, by oral intake of a single dosage of 0.008 gm. of thallium acetate per kilo of body weight, produce alopecia. Other investigators confirmed these reports and all of them agreed as to the great value and progress made by introduction of the thallium method for production of epilation. Toxic symptoms described by various authors as occurring sometimes in older children and always in adults, are neuralgic pains in the muscles and joints, gastro-intestinal disorders, albuminuria, tachycardia, and skin eruptions of various character. It is an interesting fact, that the toxicity increases greatly after the age of puberty; undoubtedly to be explained by all of the changed function of the sexual glands, and in connection with this all of the endocrine hormonal secretions.

In June, 1927, having a few ringworm cases on my dermatologic services, I used thallium acetate and convinced myself of the good results to be obtained by this method. Six cases

were treated. The age of the children varied from 3-8 years. The dosage used was 6-8 milligrams per kilo of body weight. I purposely remained under the advised dosage of 8 mgm. because of having at hand only Merck's thallium acetate, and not the Kahlbaum thallium depilatory tablets which are now recognized as the most dependable prep-

completed by extraction, which was easily and painlessly performed. Local treatment was continued during the entire course, and consisted in daily painting of the scalp with tincture of iodine diluted to $\frac{1}{3}$ strength, and by application of 5% sulphur ointment.

The accompanying photographs illustrate this report. (Fig. 1 and 2)



D. W., 8 years old. Diagnosis: ringworm of the scalp. 12-16-27 220 mgm. of Thallium acetate by mouth.



The same patient 1-12-28. Complete epilation.

aration. Epilation occurred within 2-3 weeks; in some instances as early as 10 days. Toxic symptoms manifested themselves in 1 case by temporary weakness of both legs, which after 2 weeks cleared up entirely, and in 1 case by temporary albuminuria; no other untoward effects were observed. The alopecia was not fully spontaneous in 2 cases and had to be

Concluding, I wish to state that in my experience thallium acetate has proved to be a valuable drug in the treatment of ringworm of the scalp. I should like to emphasize the toxic dangers of its use in adults, in children near the age of puberty, and with those not in perfect physical condition.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if:

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

CONSTITUTION AND BY-LAWS

Your attention is directed to the proposed revision of Constitution and By-Laws as proposed by our Counsel, and published in this issue of the Journal. This matter is now being considered by a special committee that was instructed to prepare the revision for its first reading at the meeting of the House of Delegates in June. Publication at this time is for the purpose of enabling all members and delegates to study the first draft carefully, and to offer suggestion and amendments aimed to perfect this instrument.

SECTION MEETING

Announcement was made some time ago that the Program Committee of the State Society would experiment this year with the establishment of 2 distinct sections, which would hold separate meetings, with special programs, at the same time that the general scientific sessions were being held. The specialties selected for this experiment were: (1) Ophthalmology and Otorhinolaryngology; (2) Pediatrics. The chairman of the first named section reports that his efforts have been crowned with such success that he is already assured of a sufficient number of papers (16) to provide for both morning and afternoon sessions on Thursday and Friday. Response from those interested in pediatrics has been encouraging but there yet remains room for several additional papers. Any member desiring to present a paper dealing with any phase of diseases of children—it is not required that the author shall be a pediatrician, with personal

practice limited to that specialty—should communicate with Dr. Ralph K. Hollinshead, Chairman of the Program Committee.

The general Scientific Program is about completed and advance information concerning its make-up indicates that it will be an unusually fine one. Members should commence now their preparations to attend the June meeting at Atlantic City.

RADIO BROADCASTING

That portion of our public educational program which has been issued weekly by radio, being broadcast through the courtesy of stations WHAR and WPG, both of Atlantic City, has now covered a period of 3 months—December to March—and we are prepared to carry it through at least 2 additional months. Each of the 12 addresses so far delivered has been mimeographed in advance and delivered to 150 newspapers in New Jersey with a "release" date permitting publication coincident with its broadcasting. Some of the most important papers of the state have published these health talks—all dealing solely with preventive medicine—in full, but we find it difficult to check up on the majority, as to whether the material is being utilized for passage through these papers to their readers.

Until we can ascertain what proportion of these newspapers are actually publishing the radio talks, it is impossible to determine the wisdom of continuing to distribute such copy. Will you please inform us whether your local paper is publishing the State Society Health Talks?

In Memoriam

GLENDON, Walter P., of Bridgeton, New Jersey, departed this life on February 14, 1928.

The death of Dr. Glendon has brought to an untimely end a career of exceptional brilliancy and promise. Tragically enough, death came to him apparently just at a period in his life when, seemingly at least, he might have had the right to expect some respite from his work and an opportunity to indulge in a little more rest and recreation than he had allowed himself and which he so much needed. For many years he had been the most outstanding figure in the medical profession of Bridgeton, both as a physician and surgeon and as one of the city's foremost and most progressive citizens.



WALTER P. GLENDON, M. D.

To his professional associates, his death is an irreparable loss and to his many patients it comes with the force of a personal bereavement, while in the larger circle of friends and acquaintances who were privileged to know him in varying degrees of intimacy, there will be left a gap hard to fill. His death followed an attack of meningitis originating in nasal sinus focal infection, after an illness of 10 days; though for the past year he had suffered attacks of neuritis which had occasioned him much suffering. In spite of this, he had continued at work almost to the very end and it was no uncommon thing during the year preceding death for him to rise from a sick

bed in the hospital, step across the corridor to the operating room, perform one or more major operations, and return to his own room and bed. He never spared himself, and this disregard of his own physical welfare left him little reserve when the final attack came that resulted in his death.

Dr. Glendon graduated from Jefferson Medical College in 1886, and immediately entered into general practice at Cedarville, New Jersey, where he remained until removal to Bridgeton in 1912. Early in his professional career, he commenced to give special attention to surgery, in which he later achieved signal and conspicuous success. His ability as a surgeon was quickly recognized and his services were widely sought. He became a member of the Surgical Staff of the Bridgeton Hospital in 1906, while still residing in Cedarville, and at the time of his death was President of the Staff and Chief Surgeon to that hospital. For the past few years much of his work has been done in the Salem Hospital, but the Bridgeton Hospital owes much of its success to his untiring efforts.

In his operative work, which covered every department of surgery, he was always competent and self-reliant, and never perturbed by any emergency that might arise. While conservative, he was at the same time thoroughly progressive and always in touch with the best surgical knowledge of the day. He was never carried away by passing medical or surgical fads, but was quick to see and utilize any real advance in medical or surgical knowledge.

He was a member of the Cumberland County Medical Society, the New Jersey State Medical Society, the American Medical Association, and a Fellow of the American College of Surgeons. He was also a Councillor of the State Society.

One aspect of Dr. Glendon's many sided mental life was perhaps not generally known, except to a few intimates, and that was his fondness for general literature. He was an omnivorous reader with a cultivated taste and genuine appreciation of the great novelists and writers of the day. He was particularly fond of Dickens, a rather unusual thing in this day, and when he had a sympathetic listener often descanted upon the charms and character portrayals of his favorite author. A copy of some of Dickens' works was always within reach, at his bedside, in the perusal of which he was accustomed to find mental rest and diversion.

He often expressed the hope that he might be spared a slow and lingering illness and, dying as he did, almost in the full zenith of his powers, his wish was to a certain extent gratified; for he was spared a long period of enforced inactivity and inability to work. The recollection of his genial and kindly personality will long survive in the memory of his friends, patients and colleagues.

CLEMENT, Edgar, 124 West Kings Highway, Haddonfield, died February 13, 1928, at the age of 62, after a year of illness.

Dr. Clement had practiced medicine in Haddonfield for 30 years. He was born at Lee's Point and was a graduate of Hahnemann Medical College in Philadelphia.

He was connected with the State Tuberculosis League and on the staff of West Jersey Hospital for 20 years. He had been prominently identified with the tuberculosis hospital at Ancora and was one of the sponsors of the new Lakeland institution. Ill health forced him to retire from the hospital two years ago but he had continued active practice until last year.

His widow, Dr. Lavinia Baily Clement, two sons, a daughter, two brothers and his mother survive him.

TWINCH, Sidney A., Medical Director and Surgeon in Chief of the Hospital and Home for Crippled Children, ended his brief pilgrimage in this earthly school on February 6, 1928, on the Pacific Palisades of California, where he had gone for a much needed rest. He had followed the path which leads to success, honor and happiness and at the end entered the road into which all earthly pilgrimages merge.

"In nothing does man more nearly approach the gods than in giving health to men" and all through the years of his busy and active life Dr. Twinch practiced his chosen field of orthopedics in his adopted city of Newark, whose children he made it his mission to serve and to save. Endless numbers living today owe to him an everlasting debt of gratitude. He rescued scores from the affliction of being hopelessly crippled. Following the wide-spread epidemic of infantile paralysis in Newark, in 1916, he willingly consented to continue the work begun by Dr. Coit and carried on the great work of reconstruction and rehabilitation for the afflicted children among the city's poor. To this work he gave months of untiring service with no reward beyond the gratitude of those whom he helped, but it entailed an expenditure of health and strength from which he never fully recovered. He served his city and those to whom he ministered patiently, skillfully and courageously.

Dr. Twinch was born in Windsor, England, February 27, 1863, son of Frederick Twinch and Ellen Minton. He entered the College of Physicians and Surgeons, Columbia University, from which he was graduated with the class of 1890. He was a member of the Munn Avenue Presbyterian Church, East Orange. Dr. Twinch was married on April 19, 1897, to Virginia Halsey, of Newark, New Jersey, by whom and his son, Minton Halsey Twinch, a brother, Wilfred Twinch, of Pacific Palisades, California, and a sister Mrs. Edward Merrins, of East Orange, he is survived. He was Consulting Orthopedic Surgeon Beth Israel Hospital, Newark, Orthopedic Surgeon Newark City Hospital, Consulting Orthopedic Surgeon St. James Hospital, Newark, Fellow of the American College of Surgeons, member of the National Orthopedic Association, member of the American Medical Association, of the New York Academy of Medicine, of the New York Electrotherapeutic Society, of the New Jersey State Medical Society, the Essex County Medical Society, the Academy of Medicine of Northern New Jersey, the New Jersey Society of Surgeons, and Medical Director and Surgeon in Chief of the Newark Hospital and Home for Crippled Children.

Sidney A. Twinch was endowed with ability and capacity for leadership. He proved himself a master in his specialty. He was a great student, a great worker and a friend of silence. He was a "Builder of Mankind" and his lasting monuments are those whom by his skill and infinite patience he rescued from crippled helplessness. He leaves behind a record that can be dimmed neither by time nor circumstance.

BLANK, Louis N., of 74 South Eighth Street, Newark, aged 49 years, died February 22, 1928, after a year of illness.

Dr. Blank was graduated from Baltimore Medical College in May, 1904, having previously attended Wesleyan and New York Universities. Later he went abroad for several years, taking postgraduate courses in several European cities.

He was a member of St. John's Lodge No. 1, F. and A. M., and the Newark Lodge of Elks. He was treasurer of the Oak Building and Loan Association and a director of the Chapel Building and Loan.

Revision of Constitution and By-Laws

At the 161st Annual Meeting of the Medical Society of New Jersey, held at Atlantic City, June 9-11, 1927, the Board of Trustees presented a "Special Report on the Charter, Constitution and By-Laws", prepared by the Society's legal counsel after a careful study of existing documents and of criticisms directed at actions taken under such rules and regulations.

The advice of counsel is pretty well summed up in the following paragraph:

"In my opinion, the provisions of the Charter are very broad and it needs no amendment. If the membership of your Society is made to accord with the provisions of the Charter, the present difficulties can be overcome by a careful and thorough revision of the Constitution with reference to the Charter and a careful and thorough revision of the By-Laws with reference to both the Charter and the Constitution."

Upon receipt of this opinion, the Board of Trustees authorized its chairman to engage and confer with legal counsel for the purpose of drafting a proper Constitution and By-Laws to accord with the Charter. At a meeting of the House of Delegates, June 11, 1927, a motion was adopted to appoint a "Special Committee on Revision of the Constitution and By-Laws", to which this document should be referred with instructions to present their report for first reading at the annual meeting of 1928.

We are publishing herewith the revision of Constitution and By-Laws, as prepared by counsel, so that all members may have full opportunity to study it and to make suggestions to the special committee having this matter in charge. That committee consists of: Drs. B. Van D. Hedges, Frederick J. Quigley, F. G. Scammel, C. M. Trippe, W. Blair Stewart, Andrew F. McBride, and John B. Morrison.

Constitution of the Medical Society of New Jersey

ARTICLE I.

Name. The name and title of this organization shall be "The Medical Society of New Jersey".

ARTICLE II.

Purpose of the Medical Society of New Jersey

Object. The purpose of The Medical So-

ciety of New Jersey shall be: First—To federate and organize the profession of the State of New Jersey. Second—To unite with similar organizations of other states to compose the American Medical Association. Third—To advance medical science and elevate professional standards; to safeguard the material interests of the profession and promote friendly relations among its members; to educate the public in preventive medicine and hygiene, and in all to make the medical profession most capable of rendering service to humanity.

ARTICLE III.

Component Societies

The County Medical Societies which hold Charters from The Medical Society of New Jersey shall be known and referred to in the Constitution and the By-Laws by the title of "Component Societies".

ARTICLE IV.

Composition of the Medical Society of New Jersey

Section 1. The Medical Society of New Jersey shall be composed of the Fellows; the Officers; and the Delegates in good standing in their respective Component Societies chosen by and from each of the Component Societies, as hereinafter provided.

Section 2. (a) The Fellows of The Medical Society of New Jersey shall consist of the ex-Presidents.

(b) Officers. The Officers of The Medical Society of New Jersey shall be the President, three Vice-Presidents, Corresponding Secretary, Recording Secretary, Treasurer, the members of the Board of Trustees and the Councillors.

(c) Delegates. The Delegates shall be chosen by and from the Component Societies and shall be members of The Medical Society of New Jersey for the period for which they are elected, subject to their continuing in good standing in their respective Component Societies and their respective Component Societies continuing in good standing in The Medical Society of New Jersey.

Section 3. Delegates. Each Component Society shall be entitled to at least ten Delegates, to be elected at their respective annual meetings by a three-fourths vote by individual ballot of the members present. All Delegates shall be elected for a full term of five years. Each Component Society shall be entitled to elect one Delegate for each ten members, up to a membership of 400; when the membership of the Component Society shall be above 400, it shall elect one Delegate for every 50 members or major fraction thereof

by a three-fourths vote by individual ballot of the members present, provided there shall not be less than three Delegates elected by and from each Component Society. In the event of the subdivision of any of the existing Counties and the creation of a Component Society in a new County, then the Delegates of the Component Societies existing in the old County and the new shall be apportioned as above set forth and the quota of the original Component Society shall be diminished correspondingly.

Each Delegate elected by the Component Societies shall present a certificate signed by the President and Secretary of his Component Society in the following form:

.....N. J.19....
 This is to certify thatM.D.,
 was elected as a Delegate of The Medical Society of New Jersey on the day
 of19...., by the Component Society of the County of
 according to the requirements of the Charter, Constitution and By-Laws of The Medical Society of New Jersey.

 President.

 Secretary.

The Delegates elected by and from the respective Component Societies shall lose their status as such Delegates:

(a) In the event that the Component Society electing them shall be declared delinquent by The Medical Society of New Jersey, then the entire Delegation of such Component Society shall lose its status during the period of such delinquency.

(b) In the event that a Delegate shall cease to be in good standing in his Component Society, then a vacancy shall exist in the Delegation of the Component Society; a notification in writing of such vacancy must be sent to the Recording Secretary of The Medical Society of New Jersey before the vacancy can be declared or filled.

(c) In the event of the resignation of a Delegate, a vacancy shall exist in the Delegation of the Component Society; notification in writing of such vacancy must be sent to the Recording Secretary of The Medical Society of New Jersey before the vacancy can be declared or filled.

(d) In the event of the death of a Delegate, a vacancy shall exist in the Delegation of the Component Society; notification in writing of such vacancy must be sent to the Recording Secretary of The Medical Society

of New Jersey before the vacancy can be declared or filled.

(c) In the event that a Delegate fails to attend two consecutive annual meetings of The Medical Society of New Jersey without adequate excuse, a vacancy shall exist in the Delegation of the Component Society.

All excuses for absence shall be made in writing to the Judicial Council and its decision shall be final and shall be reported by the Recording Secretary of The Medical Society of New Jersey to the Secretary of the Component Society, and thereupon a vacancy shall occur in the Delegation of the Component Society.

In the event that a vacancy shall occur as aforesaid in the Delegation of any Component Society, the Recording Secretary of The Medical Society of New Jersey shall notify the Secretary of the Component Society of such vacancy, and thereupon the Component Society shall, at a special meeting called for that purpose, fill such vacancy for the unexpired term by an election by a three-fourths vote by individual ballot of the members present.

Section 4. All members of Component Societies in good standing, not otherwise included in the membership of The Medical Society of New Jersey, are hereby constituted Associate Delegates and may partake in all the privileges of the general session.

Section 5. Honorary Members shall be physicians and surgeons who have attained distinction in the profession, and may be elected by a two-thirds vote of the House of Delegates; provided they shall have been recommended for election by the Committee on Honorary Membership; and provided further that the number of living Honorary Members shall not exceed fifteen. They shall have the privilege of discussing all scientific questions presented at the sessions of The Medical Society of New Jersey.

Section 6. Any physician, resident or non-resident of the State may, upon the invitation of The Medical Society of New Jersey or of the House of Delegates, become a guest during the annual meeting, and shall be accorded the privilege of participating in the scientific work of The Medical Society of New Jersey.

ARTICLE V.
House of Delegates

The House of Delegates shall be the legislative body of The Medical Society of New Jersey and shall consist of the Fellows, the President, the three Vice-Presidents, Corresponding Secretary, Recording Secretary,

Treasurer, Chairmen of the Standing Committees, members of the Board of Trustees and the elected Delegates. The Councillors shall be entitled to sit in the sessions of the House of Delegates without a vote.

ARTICLE VI.

Board of Trustees

The Board of Trustees shall be the executive body of The Medical Society of New Jersey and shall be composed of the Fellows, the President, the three Vice-Presidents, the Recording Secretary, the Corresponding Secretary, the Treasurer, and five Delegates who shall be elected by The Medical Society of New Jersey to the Board from the Component Societies at large as provided in the By-Laws.

ARTICLE VII.

Section 1. The House of Delegates may provide for the division of the scientific work of The Medical Society of New Jersey into appropriate sections, when the necessity for such division arises.

Section 2. The House of Delegates shall organize Councillor districts within the State. Said districts shall be composed of two or more Component Societies. The Medical Society of New Jersey shall elect a Councillor from among the Delegates for each district, which Councillors collectively shall constitute the Judicial Council.

ARTICLE VIII.

Meetings

Section 1. The Medical Society of New Jersey shall hold an annual meeting, during which there shall be held daily no less than one general session, which shall be open to all registered members.

Section 2. The time and place for holding the annual meeting shall be fixed by the House of Delegates for each succeeding year. The Board of Trustees may change the time and place when deemed necessary.

ARTICLE IX.

Officers

Section 1. All officers, except the Fellows of The Medical Society of New Jersey and the five members of the Board of Trustees elected as prescribed by the By-Laws, shall hold office for one year, or until their successors are elected.

Section 2. The Officers of The Medical Society of New Jersey, except the Fellows as members of the Board of Trustees, shall be elected by The Medical Society of New Jersey in the afternoon of the second day of the annual meeting by ballot, it being hereby pro-

vided that no member shall be eligible to more than one office at the same time except the President, the Vice-Presidents, the Recording Secretary, the Corresponding Secretary and the Treasurer, who, by virtue of their offices, are members of the Board of Trustees. And it is further provided that in the event of a vacancy occurring between the annual meetings, the said vacancy shall be filled, *ad interim*, by the Board of Trustees.

ARTICLE X.

Funds and Expenses

Section 1. Funds for meeting the current expenses of The Medical Society of New Jersey shall be provided for by an annual *per capita* assessment upon each Component Society, by donation, by sale of its publications and from miscellaneous revenue. During the annual meeting funds may be appropriated by the House of Delegates, subject to the approval of the Board of Trustees, for the expenses of the annual meeting, for publications, for expenses of Officers and Committees, but for no other purpose, unless authorized by a two-thirds vote of the House of Delegates and approved by the Board of Trustees.

Section 2. The Board of Trustees may incur any necessary expense *ad interim*.

ARTICLE XI.

Seal

The Seal of The Medical Society of New Jersey heretofore adopted shall continue, until otherwise ordered, to be the seal of The Medical Society of New Jersey.

ARTICLE XII.

This Constitution may be amended by The Medical Society of New Jersey by a two-thirds vote of the members present at any annual meeting, provided that the same has been approved by the Committee on Constitution and By-Laws pursuant to Chapter IX., Section 7, of the By-Laws, and, provided further, that such amendment shall have been submitted in writing at a previous annual meeting and shall have been officially sent to each Component Society at least one month before the annual meeting at which final action is to be taken.

By-Laws of the Medical Society of New Jersey

CHAPTER I.

Membership

Section 1. The Fellows and Officers of, and the elected Delegates to, The Medical So-

ciety of New Jersey are members, by act of incorporation; Associate Delegates, Honorary Members and Guests are members, by privilege of the Constitution, and enjoy the rights given them thereby.

Section 2. February 1st in each year is hereby set as the date for closing the Official List. Five days before this date the Treasurer of each Component Society shall forward to the Recording Secretary and to the Treasurer of The Medical Society of New Jersey, a complete list of all the paid up members, with correct addresses. After this date no name shall be accepted for the Official List.

On the first day of February in each year, the Secretary of each Component Society shall send to the Recording Secretary a list containing the following information: the names of the Officers, Reporter and Censors, the name of the member of the Nominating Committee, the names of Delegates to The Medical Society of New Jersey, the names of new members elected during the year, the names of deceased members during the preceding year, the names of members who have resigned or moved out of the county during the preceding year.

Upon the request of the Recording Secretary, the Secretary of each Component Society shall furnish a complete list of the names of all non-affiliated physicians resident in the County.

The Official List as published each year shall be *prima facie* evidence of the right of all members to register at the annual meeting and, unless otherwise ordered by the House of Delegates, shall form the basis of representation of the Component Societies.

Section 3. No person who is under sentence of suspension or expulsion from any Component Society of The Medical Society of New Jersey, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or privileges of The Medical Society of New Jersey, nor shall the said member be permitted to take part in any of its proceedings, until such time as said member shall have been relieved of such disability.

Section 4. All members and Delegates in attendance at the annual meeting of The Medical Society of New Jersey shall write their names and addresses in the registration book and failing to do so shall be considered as absent.

Section 5. All elected Delegates of The Medical Society of New Jersey shall present to the Committee on Credentials a certificate, bearing the seal of The Medical Society of New Jersey and the signature of its Recording Secretary, signed by the President and

Secretary of the Component Society which they respectively represent; and no such Delegate will be permitted to register or sit as a member of the House of Delegates without such certificate, or if the Component Society of which he is a Delegate has not paid its annual assessment.

Section 6. When a member's right to membership has been verified by the Committee on Credentials, the said member shall receive a certificate or badge, which shall be evidence of his right to the privileges of membership. No member or Delegate shall be permitted to take part in the proceedings of The Medical Society of New Jersey until the provisions of this Chapter have been complied with.

CHAPTER II.

Annual and Special Meetings

Section 1. The Medical Society of New Jersey shall hold an annual meeting at such time and place as may be fixed by the House of Delegates or by the Board of Trustees.

Section 2. Special meetings of The Medical Society of New Jersey or of the House of Delegates shall be called by the President upon the petition of twenty or more members representing four or more Component Societies, or upon the request of the Board of Trustees.

CHAPTER III.

General Meeting

Section 1. A general meeting shall include all registered members, all of whom shall have equal rights to participate in the proceedings. The President shall preside over all meetings, or, in his absence, or disability, or by request, the Vice-President in the order of seniority shall preside. The President's Annual Address shall be delivered before the general meeting as shall be arranged for in the official program.

Section 2. The general meeting may create Committees for scientific investigations of special interest or importance to the profession or public, and may receive and dispose of reports of the same, but no expense shall be incurred in connection therewith until recommended by the House of Delegates and approved by the Board of Trustees.

Section 3. The order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until completed, unless otherwise ordered by The Medical Society of New Jersey.

Section 4. No address delivered or paper read before The Medical Society of New Jersey, with the exception of those delivered by the President and invited orators, shall oc-

cupy more than twenty minutes in its delivery or reading, and no member shall speak longer than five minutes, nor more than once, on any subject unless by permission of The Medical Society of New Jersey.

Section 5. All papers and reports presented to The Medical Society of New Jersey shall be its property, and any author failing to deposit the same with his name with the Recording Secretary when read may be debarred from having his paper published in the Journal of The Medical Society of New Jersey. Permission to publish the same in Medical Journals may be granted by the Committee on Publication.

CHAPTER IV.

House of Delegates

Section 1. The House of Delegates shall meet at the time and place of the annual meeting of The Medical Society of New Jersey, and shall arrange its sessions so as not to conflict with the general meetings of The Medical Society of New Jersey, nor with the sessions held for the President's Address and for the annual orations. The House of Delegates may meet in advance of, with, or remain in session after, the final adjournment of the annual meeting.

Section 2. Twenty members, representing at least four Component Societies in good standing, shall constitute a quorum. All of the meetings of the House of Delegates shall be open to members of The Medical Society of New Jersey, but only members of the House of Delegates shall have a right to vote.

Section 3. The House of Delegates shall consider the reports of all Component Societies, and shall have authority to make such recommendations and adopt such measures as they may deem most efficient for building up and increasing the interest in Societies already existing; to organize the profession in Counties where affiliated Societies do not exist.

Section 4. The House of Delegates shall have authority to appoint Committees for special purposes from among the members of The Medical Society of New Jersey, and such Committees may report to the House of Delegates in person and participate in the debates thereon.

Section 5. The House of Delegates or Board of Trustees shall approve all memorials and resolutions issued in the name of The Medical Society of New Jersey before the same shall become effective.

CHAPTER V.

Selection of Officers

Section 1. All elections shall be by ballot

and a majority of the votes cast shall be necessary to elect.

Section 2. Each Component Society shall elect at its annual meeting one of its elected Delegates to serve as a member of the Nominating Committee of The Medical Society of New Jersey, and one of its elected Delegates alternate thereto; this elected member, or his alternate, shall present his credentials to the Recording Secretary as a member of the Nominating Committee from the Component Society by which he is elected at the close of the first session of the annual meeting. The Junior Past President of The Medical Society of New Jersey shall be the member of the Nominating Committee representing the Fellows. If he shall not be able to serve, then at the close of the first session of the annual meeting the Fellows shall elect one of their number to be a member of the Nominating Committee, who shall forthwith present his credentials to the Recording Secretary. The Delegates, or their alternates so elected from their respective Component Societies, and the representative so elected by the Fellows, shall compose the Nominating Committee. This committee shall meet at the close of the first session and report the result of its deliberations to the House of Delegates in the form of a ticket containing the names of one or more members for each of the offices to be filled at that annual meeting, including nominations for Trustees, Standing Committees, Councillors, Delegates to the American Medical Association, and to corresponding State Medical organizations, etc.

Section 3. Five Delegates shall be nominated and elected to the Board of Trustees from the Component Societies at large, one from each judicial district. It is hereby provided that the election of these Trustees shall be as follows: One for five years, one for four years, one for three years, one for two years, one for one year, and thereafter one for each year for a full term of five years. In the event of a vacancy by death, resignation, or otherwise, the Board of Trustees of The Medical Society of New Jersey shall appoint a member *ad interim*.

Section 4. The report of the Nominating Committee, and the election of Officers, Standing Committees, Delegates to the American Medical Association, and Delegates to State Medical organizations, for the ensuing year, shall be the first order of business of The Medical Society of New Jersey in the afternoon of the second day of the annual meeting.

Section 5. Nothing in this Chapter shall be construed to prevent additional nominations

being made by members of The Medical Society of New Jersey.

CHAPTER VI.

Duties of Officers

Section 1. The President shall preside at all meetings of The Medical Society of New Jersey and of the House of Delegates, preserve order and decorum in debate, give a casting vote when necessary, appoint all Committees not otherwise provided for, order reports, enforce the observance of the By-Laws, and perform such other duties as custom and parliamentary usage may require. He shall also deliver an annual address at such time and place as may be arranged for by the Program Committee.

Section 2. The Vice-Presidents shall assist the President in the discharge of his duties, and in the absence or disability of the President the Vice-President in order of seniority shall preside at all meetings of The Medical Society of New Jersey and of the House of Delegates, and perform all the duties pertaining to the office. In case of vacancy in the office of the President by death, resignation, or removal, the Vice-President in order of seniority shall perform all the duties pertaining to the office of President during the interim until the office of President is filled by the Board of Trustees.

Section 3. The Treasurer shall give bond for the trust reposed in him as required by the Board of Trustees. He shall demand, receive and preserve all funds due The Medical Society of New Jersey, together with bequests and donations; keep a correct list of the same, together with the name of each donor. He shall not pay any moneys out of the Treasury except on resolution of the Board of Trustees, or upon warrant of the Officer or Committee responsible for the expenditure, countersigned by the Chairman of the Committee on Finance and Budget and endorsed by the President, and otherwise in accordance with these By-Laws. His accounts shall be subject to an examination by an auditing committee appointed from the Board of Trustees at such times as they or the House of Delegates may order, and he shall annually render a full statement of all the transactions of his office at the annual meeting of The Medical Society of New Jersey. Whenever 90% of the annual budget appropriated for any office or committee has been paid, he shall so notify the proper Officer or Chairman. He shall charge upon his books the assessment against each Component Society at the end of the fiscal year, collect and make proper credits for the same, and

perform such other duties as may be assigned to him.

Section 4. It shall be the duty of the Board of Trustees to organize annually and elect a Chairman and Secretary; to exercise a general supervision over the affairs of The Medical Society of New Jersey, with authority to recommend and to act for The Medical Society of New Jersey whenever necessary; to keep full minutes of all meetings; to give the House of Delegates a summarized brief of its proceedings and recommendations, and to publish yearly in the Journal of The Medical Society of New Jersey a full report of the same; to require and hold the official bond of the Treasurer for the faithful execution of his duties; to annually audit his accounts and to include a statement of the same in the general report. The Board shall have authority to advise in the deliberations of the several Standing Committees, and especially to supervise the work of the Publication Committee, and when necessary to appoint an editor and such other assistant as the demands of The Medical Society of New Jersey may require; to refer and otherwise dispose of all business properly arranged for its disposition; to determine all salaries, to pass upon all recommendations, and order all necessary expenditures for The Medical Society of New Jersey. In the event of a vacancy in the office of Treasurer by death, or otherwise, the Board of Trustees shall select one of its members to fill the vacancy.

Section 5. The Recording Secretary shall have custody of the Constitution and By-Laws and of the records of The Medical Society of New Jersey and of the House of Delegates; shall attend the meetings, record the proceedings, and give notice of all the regular and special meetings of The Medical Society of New Jersey and of the House of Delegates. He shall notify the Chairman of each Committee of his election or appointment, with the names of his associates, together with the subject referred to the Committee, furnish Delegates to the American Medical Association and corresponding State Medical organizations, with proper credentials, demand and receive from the Component Societies a copy of the proceedings of their first meeting, file the same among the archives of The Medical Society of New Jersey, and perform such other duties as may be assigned him by the House of Delegates. He shall keep a record of the election of all elected Delegates, and report to The Medical Society of New Jersey each year which Component Societies are entitled to additional elected Delegates, and the number, and shall

also report the names of all such Delegates as shall have forfeited their membership. He may employ assistance when authorized by the House of Delegates or by the Board of Trustees.

Section 6. The Corresponding Secretary shall have charge of, and custody over, all letters and communications transmitted to The Medical Society of New Jersey, and shall keep a verbatim copy of all communications sent out in the name of The Medical Society of New Jersey. It shall be his duty, agreeable to the directions of The Medical Society of New Jersey, to write and answer letters, and to manage the general correspondence of The Medical Society of New Jersey and to report thereon to The Medical Society of New Jersey at its next annual meeting. He shall transmit to the Secretaries of the several Component Societies information upon such subjects as have been acted upon in The Medical Society of New Jersey relative to their respective interests and notify the honorary members of their election to The Medical Society of New Jersey; transmit to them a copy of the Constitution and By-Laws; provide for, and take temporary charge of, the registration at the annual meeting; preserve all records until relieved of them by The Medical Society of New Jersey and perform such other duties as may be required by his office or assigned to him by The Medical Society of New Jersey.

CHAPTER VII.

Reporters

Each Component Society shall elect one of its elected Delegates a Reporter, whose duty it will be to furnish to the Committee on Scientific Work a brief and intelligent report of important transactions of the Component Society represented by him, of special extracts from papers read of interesting cases reported, and of the prevalence of contagious and other diseases in the County, of the removal of any member from his Component Society by death or otherwise, and of the members elected during the year; also general information of importance to The Medical Society of New Jersey.

CHAPTER VIII.

Judicial Council

Section 1. The Councillors shall be regularly nominated by the Nominating Committee and elected by The Medical Society of New Jersey.

Section 2. Collectively, they shall constitute a Board of Censors of The Medical Society of New Jersey known as the Judicial Council. The Judicial Council shall consider

all questions involving the rights of members, whether in relation to each other, to members of the Component Societies, or to the members of The Medical Society of New Jersey. All questions of an ethical nature and excuses from Delegates shall be referred to the Judicial Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members, and shall decide all appeals taken from the decision of an individual Councillor. Its decision in all such cases shall be final.

Section 3. The Judicial Council of The Medical Society of New Jersey shall hold sessions at such times as necessity or convenience may require, subject to the call of the Chairman or upon the petition of three Councillors. It shall meet soon after the election to reorganize and to outline the work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and shall keep a permanent record of its proceedings, and through its Chairman make an annual report to the House of Delegates.

Section 4. Each Councillor shall visit each Component Society in his district at least once a year, for the purpose of inquiring into the condition of the profession and for improving and increasing the zeal of The Medical Society of New Jersey in its scientific work. He shall make an annual report to the House of Delegates of the condition of the profession in each Component Society in his district. The necessary travelling expenses incurred by said Councillors in the line of the duties herein imposed may be allowed by the House of Delegates upon the presentation of the proper itemized statement.

CHAPTER IX.

Standing Committees to be Elected Committee on Finance and Budget

Section 1. The Committee on Finance and Budget shall be composed of the following:

(a) Three members to be elected by the Board of Trustees from its own members, the term of office of one of said three members expiring every second year.

(b) Three members to be elected by the House of Delegates from the elected Delegates and Treasurers of the Component Societies who shall be elected Delegates, the term of office of one of said three members expiring every second year.

(c) The Treasurer to be an advisory member, without vote except in case of a tie.

(d) The Committee to choose its own Chairman.

This Committee shall prepare a budget to be presented to the House of Delegates at the

annual meeting and shall control the expenditure of money by Officers and Committees, as provided in Chapter III of these By-Laws. The Committee is hereby authorized to require from any Officer or Committee any fiscal information necessary for this purpose.

Committee on Scientific Work

Section 2. The Committee on Scientific Work shall consist of three members, one of whom, after the first year, shall be annually elected for three years.

This Committee shall present at each annual session a summarized report of the proceedings and recommendations of the respective Component Societies. It shall arrange symposia upon subjects of its own selection; invite eminent authorities to read essays or deliver orations from time to time and otherwise extend the interests and scientific work of The Medical Society of New Jersey as it may elect, and report to the Program Committee at least six weeks before the annual meeting.

It shall be the duty of this Committee to acquaint those taking part in the program with the conditions attending the presentation of papers to The Medical Society of New Jersey.

Committee on Publication

Section 3. The Committee on Publication shall consist of three members, who shall be elected by The Medical Society of New Jersey, and the Recording Secretary who shall be ex-officio a member. The Editor shall sit at all sessions of the Committee in an advisory capacity. The three elected members shall be elected to serve for three years.

All reports, papers and discussions may be referred to this Committee for Publication, but the Committee shall have authority to curtail such documents or to print abstracts thereof, and may return to the author any paper deemed by them unsuitable for publication in the Journal of The Medical Society of New Jersey, with reasons for non-publication. The Committee shall have authority to publish and distribute the Journal of The Medical Society of New Jersey.

Nominating Committee

Section 4. The Nominating Committee shall meet on the first day of the annual meeting, as provided in Chapter V, Section 2, and shall perform the duties therein assigned, and such others as may be referred to it by The Medical Society of New Jersey.

Committee on Program and Arrangements

Section 5. The Committee on Program and Arrangements shall consist of five members,

three of whom shall be elected as follows: one for three years, one for two years, one for one year, and thereafter one member to be elected every year to serve for the term of three years, who with the President of The Medical Society of New Jersey and the Recording Secretary as members ex officio shall constitute the Committee. It shall be the duty of this Committee to provide suitable accommodations for the meeting places of The Medical Society of New Jersey, viz: the general session, House of Delegates, Board of Trustees, the various committees and exhibits. This Committee shall have charge of all matters and details pertaining to the general arrangements, and shall have power to enlarge by creating sub-committees as necessity or urgency may require. It shall be the further duty of this Committee, after receiving from the Committee on Scientific Work, the titles, together with brief abstracts of the papers to be read, with author's names attached, to prepare and issue a program announcing the order in which the papers, discussions and all matters of business are to be presented, which order shall be followed as nearly as practicable.

All papers must be announced to the Chairman of the Committee thirty or more days before the annual meeting. The Chairman of the Committee shall report in writing an outline of the arrangement to the President for his approval and shall subsequently have the program and announcements printed and mailed to each member of The Medical Society of New Jersey.

Committee on Public Hygiene and Sanitation

Section 6. The Committee on Public Hygiene and Sanitation shall be composed of six members. After the first year two members shall be elected annually to serve for three years. This Committee shall have charge of all matters referred to it by the House of Delegates, shall consider the general health conditions of the State and all measures for the betterment of health administration through Boards of Health, Boards of Education, or other organizations, shall advise with the Committee on Welfare in reference to bills in the Legislature relating to Hygiene and Sanitation, shall coöperate with other hygienic and sanitary associations or meetings in the State, and shall render an annual report to the House of Delegates.

Committee on Constitution and By-Laws

Section 7. The Committee on Constitution and By-Laws shall consist of five members, one of whom shall be a Fellow, three elected Delegates and the Recording Secretary ex

officio. The four elected members shall be elected for a period of five years.

All proposed amendments to the Constitution and By-Laws shall be referred to this Committee for study and approval and no amendment shall be adopted without the approval of this Committee.

Composition of Standing Committees to be Elected

Section 8. All members of the Standing Committees to be elected shall be chosen from the elected Delegates, Officers or Fellows and shall, by virtue thereof, be members of the House of Delegates.

CHAPTER X.

Committees to be Appointed Committee on Credentials

Section 1. The Committee on Credentials shall consist of three members, viz: Corresponding Secretary, Treasurer, and one member to be appointed by the President. It shall be the duty of this Committee to examine all credentials and certificates presented by members and delegates, and when found in accordance with the requirements of Article IV, Sections 1 to 7, and Chapter I, Sections 2 to 6, inclusive, of the Constitution and By-Laws of The Medical Society of New Jersey, to issue to each, individually, a certificate or badge which, when regularly presented, shall be evidence of their right to membership. This Committee shall keep a record of all issues, together with the names and addresses of the Delegates and members and compare the same with the roster from the respective Component Societies.

The Business Committee

Section 2. (a) The Business Committee shall be composed of five members of the House of Delegates, appointed by the President. Any questions or business before The Medical Society of New Jersey or the House of Delegates for consideration may be referred to the Business Committee for subsequent report or recommendation.

(b) That during the time the House of Delegates is in session the Business Committee shall act as a Committee on Resolutions and all Resolutions shall be referred to them for recommendations before being acted on by the House of Delegates. The Committee on Resolutions shall meet at the close of each session of the House of Delegates and report at the opening of the next session.

Committee on Honorary Membership

Section 3. The Honorary Membership Committee shall be composed of three Fellows

appointed annually by the President, whose duty it shall be to inquire into the standing and qualifications of all nominees for honorary membership in The Medical Society of New Jersey, and report the same with their recommendations to the House of Delegates at the next annual meeting of The Medical Society of New Jersey.

Committee on Public Health Education

Section 4. The Committee on Public Health Education shall be composed of six members, three of whom shall be women physicians. This Committee shall elect its Chairman and shall institute and carry on the work of education of the public in matters pertaining to health and hygiene, shall cooperate with Committees of like character in the Component Societies and with the Council of Public Health Education of the American Medical Association, and shall render a report annually to the House of Delegates.

Hospital Standardization

Section 5. The Committee on Hospital Standardization shall consist of six members appointed by the President, two for one year, two for two years and two for three years, and thereafter two members annually to serve for three years. These appointees shall all be members of the staff of a standardized hospital in the State of New Jersey.

Welfare Committee

Section 6. The Welfare Committee shall be composed of at least five members to be appointed by the President. One of these members shall be elected Chairman and serve as the executive officer of the Committee. It shall be the duty of this Committee to look after all legislative matters; to keep informed as to all medical legislation introduced in the Legislature to hold necessary meetings at which each Component Society may make known its recommendations through the Chairman of its Welfare Committee; to present annual reports to the House of Delegates. To this Committee shall be referred all questions of professional welfare not included in the specific work of the Judicial Council.

This Committee shall effect a close cooperation with each Component (County) Medical Society in all matters pertaining to the welfare of the profession; request attendance of members at legislative hearings; correspondence and interviews with legislators; and shall report from time to time upon the progress of its legislative work to each Component Society. It shall be empowered to employ a special agent, or agents, and to expend such moneys as shall be approved by the Board of Trustees.

Composition of Standing Committees to be Appointed

Section 7. All members of the Committees to be appointed shall be chosen from the elected Delegates, Officers or Fellows and shall, by virtue thereof, be members of the House of Delegates.

CHAPTER XI.

Any Officer of The Medical Society of New Jersey, for sufficient reason, may resign his office, or he may be removed therefrom by order of the House of Delegates when guilty of neglect of duty, improper conduct, or upon violation of the Constitution and By-Laws. In either or all cases The Medical Society of New Jersey shall fill the vacancy so made as provided for in Article IX of the Constitution and Chapter V and Chapter VI of the By-Laws.

CHAPTER XII.

Finance

Section 1. *Permanent Fund.*

(a) There is hereby established in the custody of the Treasurer a Permanent Capital Fund, to consist of any moneys which may come to The Medical Society of New Jersey by gift or bequest and not otherwise designated, any balance remaining unexpended at the close of the fiscal year which the Board of Trustees may direct to be added to this fund, and such other moneys as may from time to time be available for the purpose.

(b) This fund shall be deposited or invested by the Treasurer in such manner as is by law provided for trust funds, or as the Board of Trustees may direct. The income from such funds may be used for the general purposes of The Medical Society of New Jersey, unless otherwise ordered, but the principal of the fund may be expended only for purposes of permanent value to The Medical Society of New Jersey, when so ordered by a two-thirds vote of the House of Delegates, such expenditure having previously been approved by the Board of Trustees, and notice of such approval sent to the Component Societies at least one month in advance of the meeting of the House of Delegates at which action is taken.

Section 2. *General Fund.*

(a) On the first day of January in each year there shall be levied on each Component Society a *per capita* assessment on the membership of such Component Society, as determined under (b) hereinafter set forth, to be paid to the Treasurer of The Medical Society of New Jersey not less than five days before

the first day of February, together with a list of the members for whom such payment is made. A similar *per capita* assessment shall be paid in the same manner immediately upon the admission or reinstatement of any such member, except that for a new member admitted after October first of any calendar year one-half of the regular assessment shall be paid. Every member for whom the assessment is paid shall be listed as a subscriber to the Journal, and be entitled to receive the same.

(b) Two weeks before the Annual Meeting each Officer and Standing Committee shall send to the Chairman of the Committee on Finance and Budget an estimate of the amount of money necessary for the work of his office during the next fiscal year. The Committee on Finance shall then proceed to consider and determine the amount of money to be raised, fix the *per capita* assessment to be levied on the Component Societies, and report their recommendations to the House of Delegates at their first session. This report may then be approved, amended, or rejected, by the House of Delegates but final action on it shall not be taken before the last session of the meeting.

(c) No Officer or Committee may spend more money than the amount allowed in the budget without the approval of the Committee on Finance, which may apportion to such Officer or Committee, on application, any unexpended balance of other items, if any, provided that the total amount must not exceed the total amount voted by the House of Delegates, without the authority of the Board of Trustees.

Section 3. The fiscal year of The Medical Society of New Jersey shall begin on the first day of June, and the financial report of the Treasurer and of all Officers and Committees shall be for this period. The budget estimates and appropriations shall likewise be for the same period.

Section 4. All motions and resolutions appropriating money for special purposes shall fix a definite sum, and shall state the budget account against which the expenditure is to be charged. Such resolutions must be passed by the House of Delegates and approved by the Board of Trustees.

CHAPTER XIII.

Rules of Conduct

The "principles of medical ethics" adopted by the American Medical Association shall govern the conduct of the members of The Medical Society of New Jersey in their relations to each other and to the public.

CHAPTER XIV.

Rules of Order

The deliberations of The Medical Society of New Jersey shall be governed by parliamentary usages as contained in Roberts' "Rules of Order", unless otherwise determined by a two-thirds vote of its respective bodies.

CHAPTER XV.

Component Societies

Section 1. All County Medical Societies of the State of New Jersey which shall adopt the principles of organization in accord with the Constitution and By-Laws of The Medical Society of New Jersey may receive a Charter from The Medical Society of New Jersey, and thereby become a Component Society in affiliation with The Medical Society of New Jersey, as hereinafter provided.

Section 2. Charters shall be issued under seal of The Medical Society of New Jersey and signed by the President and Recording Secretary. Upon the recommendation of the Board of Trustees, The Medical Society of New Jersey may revoke the Charter of any Component Society whose actions are in conflict with the letter or spirit of the Constitution and By-Laws.

Section 3. There can be but one Component Medical Society chartered in any County in this State.

Section 4. Each Component Society shall judge of the qualifications of its own members, but as such societies are the only portals to The Medical Society of New Jersey and to the American Medical Association, it is recommended that every reputable and legally registered physician shall be deemed eligible to membership in a Component Society; provided, an active member of one Component Medical Society shall not be eligible to active membership in any other Component Society at the same time.

Section 5. Any physician who may feel aggrieved by the action of the Component Society of his County in refusing him membership, or in suspending or expelling him, shall have the right to appeal through his District Councillor to the Board of Councillors.

Section 6. When hearing appeals, a Councillor or the Judicial Council may admit written or oral evidence, but in all cases efforts at conciliation should precede such hearings.

Section 7. When a member in good standing in a Component Society moves to another County of this State, his name, upon request, may, by a majority vote of those present, be transferred to the roster of the Component Society in whose jurisdiction he moves.

Section 8. Any physician living in or near

a County line may hold his membership in the Component Society most convenient for him to attend, on permission from the Component Society in whose jurisdiction he resides.

CHAPTER XVI.

Regulations Concerning the Degree of Doctor of Medicine

Section 1. Candidates for the degree of Medicinæ Doctor, may apply to any Component Society of this State, and shall be admitted to examination under the following rules and regulations:

1st. Each Component Society shall appoint annually, or *pro re nata*, a Committee of not less than five members, who shall conduct the examinations.

2nd. All examinations shall be in the presence of The Medical Society of New Jersey at a regular meeting; and no candidate shall be examined until he has given satisfactory evidence of having reached the age of twenty-one years, is of good moral character, that his preliminary education has been such as to qualify him for the study and practice of medicine, and has pursued his medical studies in some Medical College whose requirements do not fall below the minimum standard of the Association of American Medical Colleges.

3rd. The examination shall extend to all of the branches taught in the Medical Schools recognized as aforesaid, and the candidate shall then be balloted for by The Medical Society of New Jersey. If he shall receive the approving vote of two-thirds of all the members present, the presiding officer shall give a certificate to that effect to the candidate.

4th. The certificate may be presented at the next or any subsequent regular meeting of The Medical Society of New Jersey, not extending beyond the period of three years, with a written thesis upon some medical subject; and if, upon a ballot, they shall be approved by a majority of the members present, the candidate, upon the payment of fifteen dollars, shall be entitled to receive a diploma in the following form: (*Form not supplied*)

CHAPTER XVII.

Amendments

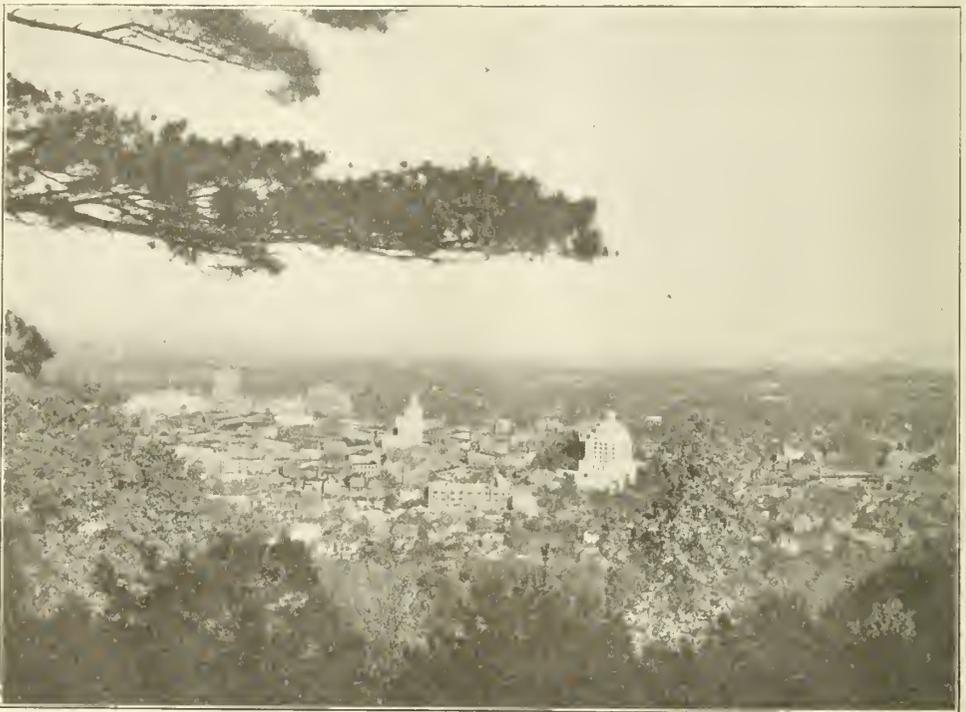
These By-Laws may be amended at any annual meeting of The Medical Society of New Jersey by a two-thirds vote of the members present, provided that at least fifty members are present; and, provided further, that the amendments shall have been approved by the Committee on Constitution and By-Laws pursuant to Chapter IX, Section 7, of these By-Laws, and shall have been twice read in open meeting and laid upon the table for one day.

Esthetics

MIDYEAR VACATIONS

In "Our Times", Mark Sullivan devotes his first chapter to a relation of the marvelous changes that took place in America about "the turn of the century" and recites the most striking features of progress during the first quarter of the twentieth century. A very striking paragraph concerns the changing attitude toward periods of labor and of leisure; "Man was enriched in his leisure. In 1900 the Saturday half-holiday was practically unknown, and

are not, for the moment, concerned about the abstruse problem but it does occur to us to ask whether physicians are profiting as they should from their growing opportunities; for it is a fact that labor and time-saving devices have effected just as great change in the practice of medicine as in any other occupation. The telephone saves the laborious writing of many letters and the traveling of many weary miles. Many emergencies that formerly required a personal visit and the consumption of one or more hours of time can now be disposed of in a 3 minute conversation over the wire from the office desk, or even from the



A bird's-eye view of Asheville from a suburban hillside.

the 10-hour working day for 6 days a week still common. In 1900, golf was a diversion of the rich, somewhat under disapproval as being effete. A winter trip to Florida or California was yet more exclusively a rare prerogative of the well-to-do. Even the 2 weeks' summer holiday had barely begun to get under way."

During the past year or two a number of magazine articles have appeared, dealing seriously with the question of what man is going to do with his increasing hours of leisure, as labor saving devices enable him to accomplish an ever increasing amount of productive work in a steadily diminishing period of time. We

bed if the call comes in at night. The automobile has, literally, revolutionized practice. Time was, and within the memory of most of us still active, when 6 miles an hour was a good average rate of speed when driving to see a patient; and, if one accepted a patient living 10 miles from the office, each visit used up practically half a day. Today 60 miles an hour is possible in an emergency, and patients living within a radius of 30 miles from the office can be visited with less inconvenience and with expenditure of less time than formerly attended upon a call one-fifth of that distance from base. Then, too, many other developments have tended to simplify the physi-

cian's work; we no longer have to carry saddle bags or even a satchel full of drugs; do not have to manufacture our own splints out of material available in the home; nor do we often have to perform surgical operations upon a kitchen table and employ improvised apparatus to effect sterilization of instruments.

The work of the physician is today simple compared to what it was even 20 years ago. He can today take care of a larger number of patients each day, render them better service, and do it with less physical labor than was possible in the early part of this century. But, and "here comes the rub", we have to

merchant or manufacturer. We take an occasional vacation at irregular periods and too often without any reasonable consideration of the best place in which to find what we need. Far too often business and pleasure are combined by using part of the vacation time, so-called, for visits to hospitals or attendance upon clinics in other cities or countries. Rarely do we take a real, true vacation, with complete relaxation and complete forgetfulness of our home work; a practice in direct contravention of what we would advise any patient seeking or needing relief from overstrain.

One of the wisest physicians we have ever



The mountains of North Carolina are literally covered with laurel and rhododendron.

admit that the greater rate of speed and the increased responsibility that attends practice today rather more than compensates for such gains. Read, in this issue, Dr. Bradshaw on "relaxation", and note his estimate of our speedy process of living and his exhortation to relieve the consequent strain by periods of relaxation.

The physician is constantly advising his patients—the tired business man and his more tired wife—to take vacations, run away from the strife and worry of everyday life for periods of rest and change of scene. How few of us regularly apply to ourselves this remedy, which is quite as necessary to maintain the health of the busy physician as of the busy

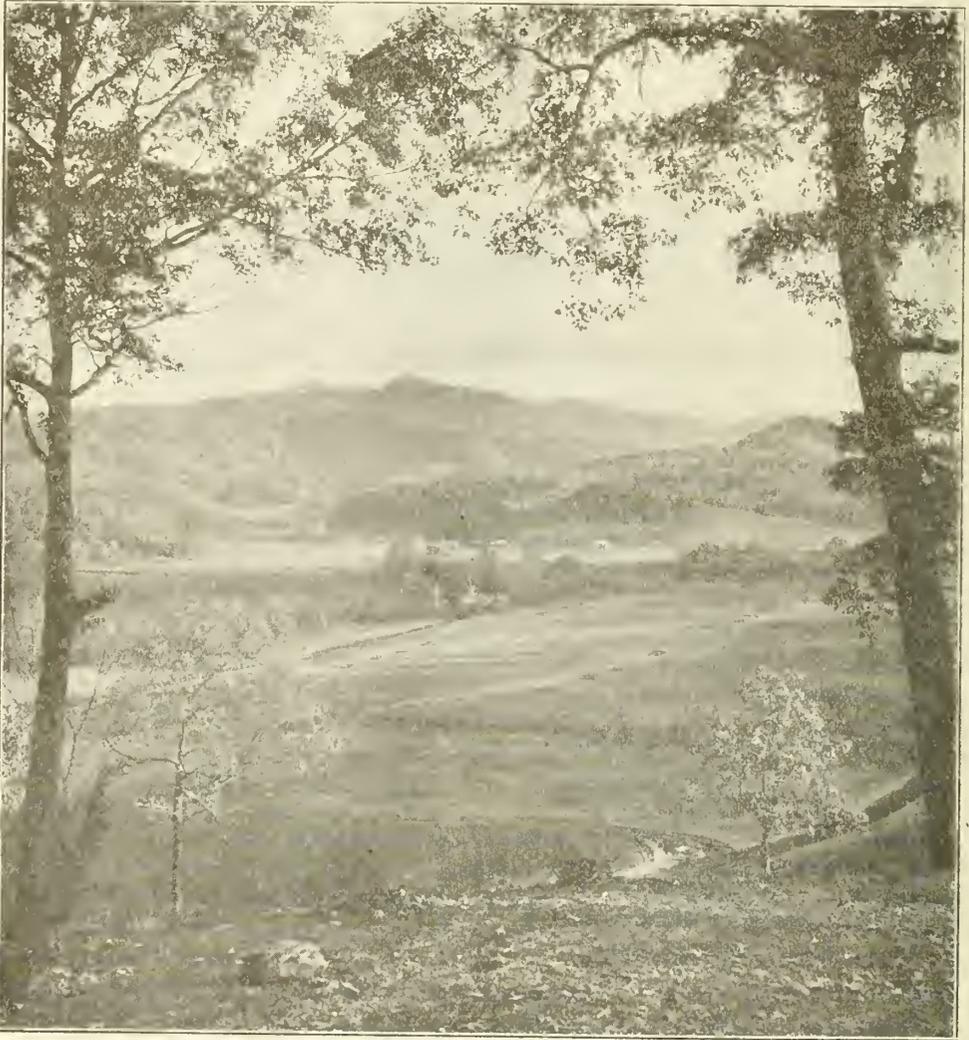
known, and who to a very advanced age remained in active practice at the very head of his profession, told us that he had early in life learned that he could do more work in 11 months than in 12, and later discovered that he could do more and better work in 10 than 11 months; and, so, he took a month off in midsummer and another in midwinter. Well beyond the age of three score and ten he could ride a bicycle and pull an oar with his youngest associates.

We are prone to think we cannot spare sufficient time to make a vacation—other than the midsummer one—worthwhile; entirely ignoring the fact that modern methods of transportation make it possible to travel consider-

able distances in very short time. Confronted recently by "that tired feeling", recognizing that we had "gone stale on the job", and realizing even that we were becoming "peevish" because of overwrought nerves, we decided to take a week off. Where should it be spent? Our advice to patients living along

sunny days with light, invigorating, stimulating air?

The one advertised place which seemed to combine all the desired attributes was the "Land of the Sky", in the Southern Appalachians. So we betook ourselves to Biltmore (near Asheville), North Carolina, and there,



The cultured beauty and the finished contours of the country of which this photo is a glimpse, would lead one to believe it was a golf course. Actually it is a view of Fish Hawk Mountain, at Franklin, N. C., near Asheville.

the Atlantic seaboard is, usually, to take refuge is some mountain region. The Alps and the Rockies were too distant for this emergency. Winter sports of the northern section of the Appalachian Range did not fit our needs. The atmosphere that goes with altitude we wanted, but not the cold that one naturally associates with thought of mountains in winter. Where could we obtain warm,

safely harbored in Kenilworth Inn, we found all we needed and far more than we had dared hope for.

The journey to Biltmore from northern New Jersey is only 20 hours by rail—from the southern portion of the state about 18—or it can be accomplished in 2 days by automobile over excellent roads and through charming country. Arrived at destination,

one finds "all the comforts of home" at his command. We have read of many hotels and restaurants that provided "home cooking" and "home comforts", but never before have we found those alluring promises so abundantly fulfilled as at Kenilworth Inn. The place can hardly be said to have a hotel atmosphere, for one feels rather as if living in a large country home, with all the facilities of a private club and all the personal care (though absolutely unobtrusive) that might be tendered by a thoughtful host. As for the food—the only possible complaint is that one is tempted to eat too much because it is so delicious and so well prepared.

The character of the mountain land of this region is strikingly different from that we have known elsewhere; a basic general elevation of 2000 ft., with a series of knolls so numerous that thousands of individuals may have their own private hill-top for construction of homes, while in the distance rise hundreds of peaks to elevations of 6000 or more feet. To our surprise we learned that the "Smokies" contain many peaks higher than Mt. Washington, which we had previously looked upon as the very highest mountain in the Appalachian system. Then we found that the term "Land of the Sky" was well deserved. Throughout most of the day the sky was of that peculiar blue that one describes ordinarily as "Mediterranean", and over this floated, in early February, masses of white clouds (cumulus) such as we expect in our region from June to August. With a temperature ranging from 50-60° F., outdoor exercise was enticing. Walking or riding, for those who do not golf, could be enjoyed without heavy wraps; a light weight overcoat, at most, for even the most sensitive. To describe all the beauty of the surrounding country would require the pen and skill of an artist, but we may convey some idea of its glory by presenting 3 photographs.

The impression we most desire to convey is that here, within a few hours of home, is a mountain retreat, with excellent hotel accommodations, that meets the need of the "tired physician" to perfection. Perhaps he has been sending patients there; he will certainly send more after he has investigated and learned from personal experience its wonderful beauty and its healing effect upon strained nerves. Possibly the best thing about the region is that it is an all year round resort, most delightful in Spring and Autumn but with a strong appeal as well for Winter and Summer. One thing that remains outstanding in our mind is that for mile after mile those mountain sides are covered with laurel and rhododendron, and we are dreaming of the floral beauty that must

burst upon the landscape when those plants bloom. So characteristic of the region is the rhododendron—plants growing to a height of 30 or 40 ft.—that North Carolina now celebrates Rhododendron Week early in June of each year. As you may have guessed, we are planning to need another week of rest about that time, so that we may return and photograph in color all that majestic sight. How many of you doctors want to go along?

Medical Ethics

RELAXATION

John Hammond Bradshaw, M.D., F.A.C.S.,
Orange, New Jersey

We all admit that this is an age of tension. At no period of the world's history has the speed of living risen to such a pitch of tense existence. With all the modern inventions for efficiency and speed it is a natural sequence that the human body, the human brain and whole nervous equipment, should feel the ever-increasing demands. We want efficiency. Imagine the present generation being satisfied with the life of, say, only 50 years ago! It can be said with little exaggeration that the pace is not letting up, but day by day is actually increasing, and the morrow may look back askance even upon us of today. Man is ever wanting more and more speed, more and more thrills, new records, more and more money, and this is calling forth more and more effort. The methods and the amusements of yesterday grow stale. Inventive genius, while increasing the possible ease and comfort, have at the same time increased the living standard to an enormous degree. One must keep step. Those who through indifference, or perhaps a misunderstood but subtle philosophy of their own, remain behind are becoming lonely. They are being looked upon as back numbers.

It is not the purpose of the writer to exclaim against progress. Is not the desire and the strife for success, outstanding superiority in work and sports, our chosen profession, our social set, environment, and all efficiency a good thing? It is not his intention to despise all this. It is far from his mind to think that the world is not better, for all those gifts, products of the inventive brain of man, such as our telegraph, our phonographs, our telephones, our automobiles, our radios, our skyscraper buildings, our speed boats, our movies, our airships, our financial systems of great efficiency, and all the almost innumerable things and forces that make the present day living

the comfort and the wonder that it really is to all sanely thinking men.

But to have these things we must pay the price; and how often is the price death itself? It is not only bodily death (*that* none of us can escape) but premature death should not be in our picture. "We may gain the whole world, but"—let that pass. This part of the subject is beyond the province of the writer. But come now, are these not truths? What really here concerns the writer is *an effort to cut down the price*. By all the laws of logic, by all the laws of averages, by all the laws of physics, physiology, and hygiene; in fact, by all laws of God and man, some day we must pay the price. How can we make it cheap? That is the question!

There is one little remedy that will help a lot. That remedy is *relaxation*. It will not only help our efficiency and our product, but it will prolong our working days. Some, by the very nature of their work (and who cannot do that work without it) are *compelled* to relax. Did you ever see the jeweler at his bench?

"In order to see how the jeweler does his fine work, I went through one of their manufacturing houses, and what I saw can be applied to surgery. The jeweler sits balanced on a stool. He wraps his legs about the stool. With this foundation he braces his elbows against his body or his bench and rests his forearms on 2 rollers which project 5 in. from the edge of the bench. There is outjutting from the edge of the bench a piece of wood on which his hands are braced. The piece of jewelry is steadied in a notch of wood. He eliminates tremors by this elaborate system of bracing. He magnifies his accuracy through lever action. Using his braced fingers as a fulcrum, the point of his instrument can be very accurately controlled by concentrating on the movement of the end of the long lever arm, his elbow or shoulder." (Bonnell). In other words, the jeweler's whole body is at rest, *relaxed*, except those parts that do the work—his wonderful fingers. Now make the application. If we were only able to relax all our system but the working part, how much more efficiently would that part work?

It goes without speaking that the chief part of us that should relax is that marvelous mechanism of ours called our brain. I know the word mechanism is open to criticism, but I used the word with intention. Go back and think of those things that in the past you did badly or bungled. Did not those events occur when your brain was working at too great tension? Now the best mental laxative is not a pill or a dope, but a rest. Instinctively we all know when we are feeling seedy. We all

know when by the very nature of our work we are too keyed-up, and our pitch is too high. We are irritable, there is friction in our labor that should not exist. We are not doing our best work. There is something wrong with the human carburetor or exhaust. We must not wait till it spells exhaustion. We must not wait till it spells disaster. We will not be there to see it, but the crepe will be on the door, just the same, if we do not at the proper time relax, and often think of and employ that simple little word, *relaxation*.

Medical Economics

M. L. Harris, M. D., Chicago

(Continued from February Journal)

CONTRACT PRACTICE

In discussing this subject it is necessary that we have a clear understanding of what constitutes contract practice. By contract practice, as applied to medicine, is meant "the contract or agreement between a physician or group of physicians and an individual, firm, organization or association to render full or part medical service to a group or class of individuals for a fixed amount or a definite rate per capita". There are a few physicians who seem to think that any form of contract practice is ethical. On the other hand, there are those who think that all forms of such practice are unethical. As a matter of fact, both of these views are wrong. Those who hold that any form of contract practice is ethical regard the subject from a purely personal and selfish point of view. They believe that it is their right and privilege to secure practice in any manner that is legitimate or legal. They fail to see that their social status differs from that of one engaged in any other occupation, and that they have a duty or obligation not only to themselves but to the patient, the public, and to the profession as a whole. Anything which disregards the obligation to any of these interested parties cannot be held to be fair or ethical. On the other hand, those who regard every form of contract practice as unethical fail to take into consideration the rights which certain individuals may have to secure competent medical service.

Contract practice per se is not unethical. It becomes a question of ethics only when the terms of the contract and the conditions and circumstances under which it is made are considered. There are some circumstances that make it impossible to secure competent medical services except by contract, as, for in-

stance, when large numbers of workmen are engaged in logging or mining at places remote from urban centers, where it would be impossible to get a competent physician to go except under contract. There are some communities so small in population as to be undesirable locations for a physician, yet whose people wish to have competent help in time of need and are willing to subsidize or guarantee by contract such a physician a certain sum in addition to that which the practice of the community would provide, and such a contract, if properly drawn, may be perfectly legitimate and ethical. There are many other conditions under which contract practice is proper and ethical. In fact, there are so many that it is difficult to lay down definite rules as to what constitutes an ethical contract. It is much easier to determine what is unethical than what is ethical, but before deciding any particular case all of the facts relating thereto must be known. It may be said, however, that a contract is unfair and therefore unethical when the compensation received is inadequate based on the usual fees paid for the same kind of service and class of people in the same community, or when the compensation is so low as to make it impossible for competent services to be rendered. In the first instance, price cutting under contract makes it unfair competition and leads to economic loss to the individual physician as well as the entire profession, and in the second instance, in addition thereto, the patient suffers from inadequate service. Underbidding by the physician in order to secure a contract is not only derogatory to the dignity of the profession and therefore demoralizing, but must lead to incompetent and inadequate care of the sick. A contract that denies a reasonably free choice of physicians in a community where other competent physicians are readily available is unfair in that it annuls the patient's right to have the physician in whom he has confidence; and the confidence of the patient is one of the greatest assets of the physician. Again, the solicitation of patients, directly or indirectly, as is done by some physicians and by a number of so-called hospital or health associations, is so unethical in every feature that it seems almost unnecessary even to mention it. In fact, every form of unethical contract practice is a distinct violation of the obligation which every physician has to uphold the honesty and dignity of the profession.

FEEES

I have said that the physician's obligation to his patient is of a moral, as well as of a contractual nature; under this moral obliga-

tion comes the question of fees. I do not now refer to the hackneyed question of the dishonest division of fees against which the conscience of every one revolts, but to the size of the fee. Honesty and fair dealing require that the fee should be governed by the economic status of the patient and his ability to pay, of course due consideration being given to the character of the services rendered. To charge a fee, regardless of what the services may have been, which the economic status of the patient makes it impossible for him to pay is little short of a crime. I am not in sympathy with the physicians or surgeons who feel that their great reputation and standing compel them to charge fees which are exorbitant when based on the financial status of the patient, nor have I any respect for the occasional one who feels that his eminence, usually self-assumed, or his cupidity has given him the right deliberately to hold up his patients. Do not infer from this that I am opposed to large fees in proper cases. On the contrary, I believe that those who are abundantly able should pay well for good service. A few concrete examples that have come to my attention recently will illustrate my meaning.

A young working girl earning about \$30 a week, on which she was obliged to maintain herself and her mother, was taken ill with what the physician who was called in pronounced appendicitis, and she was informed that it was necessary to operate on her at once. We will grant the correctness of the diagnosis but not that the case was an emergency demanding immediate operation. She was rushed to the hospital and a surgeon called who did a simple, clean appendectomy and the patient made a speedy recovery. The girl had borrowed the money from her friends to pay her hospital bill, which was demanded in advance. The surgeon, knowing her circumstances, presented her a bill for \$1500 for his operation. She explained how impossible it was for her to pay any such amount, when she was told that she would not be permitted to leave the hospital until she produced the money. Not knowing what to do, she sent for an attorney friend, who had to go out to the hospital and get her.

The next case was one in which the chief surgeon of one of our hospitals did an exploratory laparotomy on a man with an inoperable carcinoma of the stomach. At the conclusion of the operation the surgeon immediately went to the wife of the patient, who was waiting in his room, and asked for his fee, which he said was \$5000. She said she was unable to pay such a fee and besides that

she had no money with her, and that her husband always paid the bills. The surgeon said that it was customary for him to have his fee when the operation was finished and that she would have to make some arrangements to pay it at once. All this was done before he informed the wife that her husband was already dead, he having died on the operating table as a result of simply opening and closing the abdomen. When the real facts were known, the widow turned the bill over to her attorney. The attorney wrote to the surgeon asking if there was not some mistake in the bill, saying that the entire estate of the deceased, including the life insurance, household furniture and everything, amounted to less than \$20,000. The surgeon had the audacity to reply that he was sorry that there had been a mistake, but he had forgotten to add \$62 for the dressings and sent an amended bill for \$5062. The attorney, who was a high class professional man himself, came to me and asked my advice as to what he should do. It is needless for me to say what I said to him.

The third case is that of a physician who injected a fake and fraudulent so-called serum into a woman who was said to be suffering from a cancer of the stomach. The woman's husband was earning only \$147 a month. The doctor charged \$300 for this simple injection and, it is alleged, under promise that it would cure his wife, the husband paid his month's check of \$147 plus \$3 that he borrowed from a neighbor, and gave his note for \$150 payable in 30 days, which the doctor at once placed at the bank for collection. He was told not to expect any improvement in his wife for some 6 weeks or more. As his wife continued to grow worse he refused to pay the note when it became due, but reported the case to the State Board. You will say that this was the work and tactics of a quack, but it wasn't. The doctor was a well educated physician on the teaching staff of one of our Class A Universities.

BASIS OF THE PHYSICIAN'S OBLIGATION

Why is it that the duties and obligations of the physician are so much greater in a community than those imposed on any other vocation? It is for the simple reason that his profession is a monopoly—not such a monopoly as is enjoyed by some public service corporation, for instance, but a monopoly by reason of the inherent nature of his work. There is no one else competent to care for the sick but the properly trained physician. There is no one else who can assume his place in the community. As sickness, suffering and accidents in life are unavoidable, the physician becomes a necessity in the sociologic

scheme. The very fact that the conditions which the physician is called on to relieve come to the individual unbidden and render him helpless and dependent bring to the fore with strong emphasis the humanitarian aspect of the practice of medicine, an aspect which should never be forgotten and one which imposes on the physician certain moral obligations which cannot be repudiated. If we recognize that the practice of medicine is a monopoly we must admit that this monopoly entails on the profession a definite and distinct duty which cannot be delegated, and this duty is the care of the sick and suffering. It doesn't mean the care of some of the sick, or even of all of the sick some of the time, but it means the care of all of the sick all of the time. If the medical profession as a body fails to grasp and to fulfil its entire duty in this respect, then will private and public institutions and legislatures step in and take the matter out of the hands of the profession. The health of the individuals of a community or of a nation is recognized by all as the most important element in the welfare and prosperity of that community or nation. It is because the medical profession has failed to make proper provision for the care of all of the sick, all of the time, that we hear so much agitation about federal and state measures that inevitably tend to state medicine, and the loss of the independence of the physician. That this is no idle dream is well shown by a recent editorial in the Chicago Tribune, in which is advocated the corporation practice of medicine as offering the best way in which the public could be served. It was also perhaps because of the recognition of this failure that a group of public spirited men in Chicago a short time ago organized the Public Health Institute, which today is treating on an average of 1800 patients daily at a cost which they are able to pay and at a great profit to the institution. The old free dispensaries connected with medical colleges and fostered entirely for teaching purposes do not meet the situation. I have long thought that such institutes conducted in a strictly ethical manner would be one of the greatest assets that the profession could have. I believe further that every community should have one or more similar institutes, as its needs may require, enlarged to include all departments of medicine, and conducted entirely by the profession, where every patient unable to pay reasonable fees to his physician could receive the best medical services at a cost within his means. When this is brought about the medical profession will then be fulfilling its entire duty to the public and to itself, and on a sound business and economic basis.

Observations from the Lighthouse

HEART DISEASE: INCIDENCE, ETIOLOGY AND ECONOMIC ASPECT

Heart Disease is the greatest single cause of death in the United States, says James S. Gaumer (J. Iowa State Med. Soc., 17:385, Nov. 7, 1927), the annual quota being now close to 200,000. In 1910 it occupied third place in the leading causes of death in New York City, being preceded by pneumonia and tuberculosis. The mortality tables show that there are probably at least 150,000 deaths in the United States each year attributed to other causes (particularly influenza) which are in reality due to disease of the heart. Dublin estimates that from 5 to 9 years of age, deaths from heart disease are as frequent as from measles and whooping cough combined, while from 10 to 14 years the mortality is heavier than from all the 4 principal diseases of childhood. Drolet states that in New York City heart disease is the leading cause of death among school girls, and is outranked only by accidents as a cause among school boys. Among youths from 15 to 19 it is the second leading cause of death. As the cause of mortality among physicians, heart disease was first in both 1925 and 1926, while the records of one life insurance company show an increase in deaths from organic heart disease of 59% in the period from 1858 to 1917.

Excepting in congenital types, infections of various kinds are the cause of 70 to 90% of all impaired hearts which demand care, either as ambulant or bed cases. Of the number due to infectious agents, over one-half are the result of acute rheumatic fever or of syphilis. Therefore, by far the greater number of heart cases are preventable if we apply our knowledge of the transmission of bacterial infection. The rheumatic type is so closely allied to chorea and tonsillitis that the latter should receive the same care and consideration as is given in rheumatic fever.

In the groups of syphilitic heart cases studied by Wyckoff and Lings, the proportion of cases developing before and after the age of 50 years is about equal, the great majority of cases falling in the decades just above and below this age. The structural changes in the heart and blood vessels probably occur before 40 years of age but the patient may not be aware of them until failure begins, so that the latent period between syphilitic infection and the beginning of cardiac symptoms is a long one. On the average, about 17 years elapse between the primary lesion and the symptoms of cardiac involvement.

Examination of workers in industrial plants and of applicants for life insurance finds 2 in every 100 handicapped by organic heart disease. The cost of heart disease patients who reach the dispensaries and hospitals in New York City has been estimated at almost \$800,000 annually. The economic loss to families and industries is incalculable. In one dispensary in Chicago one-third of the families represented were dependent on charity for existence.

Educational work in heart disease may not lessen its incidence for a number of years, but it can improve the working conditions for cardiac patients and their economic opportunities. Many patients, by change of occupation, may continue the productive period of their lives; may live more comfortably, experience a shorter

period of complete disability requiring the time of others for their care, and thus lessen greatly the economic loss due to cardiac impairment.

The Symptoms of Heart Disease

Merrill M. Meyers, contributing the second paper to this symposium in the Journal of the Iowa State Medical Society, cites the anonymous statement that 80 to 90% of human ailments can be diagnosed correctly by a well trained general practitioner who possesses even a modest equipment. This he believes is also undoubtedly true in diseases of the heart, the requirement being to know the chief symptoms of cardiovascular disease, how to elicit them and how to interpret them. The clinical history is of great value. If the examiner will sit by his patient for half an hour, or even 15 minutes, carefully recording presenting symptoms, not only will he find it easier to determine the presence or absence of real heart disease, but he will also be better able to tell what form is exhibited—whether rheumatic, syphilitic, hypertensive, arteriosclerotic or some other type.

The most common symptoms of heart disease are pain, palpitation, breathlessness and edema. Less common symptoms are cyanosis, cough, hemoptysis, weakness, pallor, embolic phenomena and fainting. When the patient says he has pain or distress in the chest, there are several things to determine about it: Where is the pain; what is its character; does it radiate; what brings on the pain; what will relieve it? It may be truthfully said that the family doctor can correctly diagnose about 8 out of 10 cases of angina pectoris. In many instances the diagnosis is made on the symptom of a pain alone, for it is known that the physical as well as the x-ray examination, the blood pressure and the electrocardiogram may be entirely negative. It is rare to find angina pectoris in patients under 40 or 45 years of age; most cases are in men. The usual site of the pain is substernal, less often precordial, occasionally elsewhere in the chest, or in the neck or arms. It is not always severe but may be described as a constriction, tightening, heaviness, pressure or heavy ache. The practical point about the location of the distress, whatever its intensity, is that the substernal region is a common site. It is certainly helpful in diagnosis to note that there is unquestioned radiating pain to the left arm, but it must not be forgotten that any pain in the chest, if severe enough, may radiate to the finger tips—even that which occurs in pure cardiac neurosis. One of the most characteristic features of anginal pain is that it is seldom noticed when the patient is at rest. Having noted that the pain is precipitated by exertion, one should determine just how much exertion is necessary to bring it on, as this fact will be very helpful in prognosis. Relief is obtained from nitroglycerin and amyl nitrite, and one may find the use of these drugs helpful in differentiating true anginal from other forms of chest pain. Such terms as "pseudo-angina" and "false angina" are misleading; the patient either has angina pectoris or he does not have it. In doubtful cases the final opinion should be deferred rather than resort to a diagnosis of "pseudo-angina".

Coronary occlusion is a distinct clinical entity occurring usually in a person who has had previous attacks of angina pectoris, although an attack of coronary occlusion may be suffered by one who has always been apparently well. The most notable feature of the pain is its persis-

tency, lasting often for hours, perhaps fluctuating in intensity but becoming steadily more severe. Nitroglycerin and amyl nitrite give only slight relief and finally the doctor is called, who administers morphin, in spite of which the pain persists and the patient appears as if in shock. The diagnosis is often simple and yet, as Henry Christian observes, although his fourth year medical students generally do not miss it, the older family physician seldom recognizes it.

Palpitation is a very common complaint in cardiac patients. The causes are numerous and occur under many conditions. If the principal complaint is forcible regular beating, the patient will usually be found to have a nervous or hypertensive heart. If the complaint is continuous, rapid, regular beating, present hour after hour, the cause generally lies outside the heart; it may be an infection, such as tuberculosis, or in many cases hyperthyroidism. Premature beats, or extra systoles, may occur without the patient's knowledge, and will disappear with exercise. The important point about premature beats is their clinical insignificance.

Auricular fibrillation is a form of arrhythmia occurring in about 50% of patients with congestive heart failure. It may be paroxysmal, though it is often permanent. The paroxysmal form is characterized by spells of rapid, irregular action usually coming on abruptly and ending abruptly, associated with a full throbbing sensation in the chest and a certain degree of breathlessness. The attacks may last several minutes or several hours, but in the intervals the heart may act normally. In general, auricular fibrillation occurs in 3 forms of heart disease—rheumatic, arteriosclerotic and thyroid.

Two varieties of heart block deserve brief mention. One rather rare form known as sino-auricular block, in which there is a sudden dropping out of a whole cardiac contraction, may cause a sensation like extra systole, and is probably of little clinical significance. Auriculo-ventricular heart block is not very common and seldom produces symptoms until the block in the bundle of His is sufficiently great to cause a dropping of ventricular contractions, or until complete block occurs. In this event, with the beat down to 20 or 30 a minute, the patient has faintness or even typical Stokes-Adams attacks, characterized by lapses of consciousness and epileptiform seizures.

Paroxysmal tachycardia is often found in hearts that appear normal in every other respect. Examination may reveal no abnormality and close questioning may be required to elicit the character of the difficulty. In differentiating this form from other tachycardias it is of value to note the manner in which the patient stops the attacks, whether by deep breathing, vomiting or turning in a position to stretch the neck, thus producing vagal pressure. This response proves that the condition is simple paroxysmal tachycardia, and these alarming seizures may continue for years without affecting the functional ability of the heart.

A study of 1000 consecutive patients examined in the last few years because of symptoms referable to the heart, shows that in 49.09% definite evidence of heart disease was lacking. Many patients in this group had no discoverable disease of any sort, while in some there was involvement of other organs than the heart. The common etiologic types in order of frequency were: rheumatic, hypertensive, arteriosclerotic, angina pectoris, arteriosclerotic and hypertensive,

and syphilitic. In analyzing the symptom of pain, it was noted that the precordial location was indicated in a higher per cent of those without heart disease than with it, while the per cent with substernal pain was almost 25 times greater in the heart disease group than in the other. This emphasizes the diagnostic importance of substernal pain. A small per cent without heart disease complained of radiating pain. The proportion of those who had no pain was about equal in the 2 groups. In considering pain as it occurred in all patients, one notes that about one-third had precordial pain, about one-tenth substernal pain, and a little over one-half were free from pain.

The 3 forms of palpitation (rapid, forcible or irregular) were present in about equal proportion in the group with heart disease. Rapid beating occurred more commonly in those without than in those with heart disease. Irregular palpitation appeared in about one-fourth of both groups. Premature beats were the chief cause of irregularity in those whose hearts were considered free from disease. A little more than one-third of the entire number had no palpitation.

A summary of the symptoms difficult breathing, swelling, weakness and nervousness shows that two-thirds of the group with heart disease had breathlessness on exertion, this symptom being noted in about one-fourth of the other group. After discounting a good many complaints of swelling as due to other causes, it was found that about one-fourth of the heart disease group had such a symptom, and a very small number with hearts free from disease had it accompanying kidney trouble or varicose veins. Weakness was a very common complaint noted equally in both groups. Nervous manifestations occurred in a considerably higher number of persons without heart trouble than with it. Nearly one-half of all patients had breathlessness on exertion.

The Treatment of Cardiac Failure

For purposes of discussion, Verne C. Graber (in the last paper in the symposium) considers cardiac failure under 2 headings: early and advanced. In the first form rest, both mental and physical, leading to a reduction of heart beats and ultimate rest of the muscle, may suffice to stabilize the myocardium and restore practically normal function, provided the patient will cooperate in the measures of an easily assimilated diet, effective elimination and careful living. Digitalis may be required for those who have rapid auricular fibrillation. Fifteen minim doses thrice daily will usually bring the cardiac rate to about 80, the behavior of the heart being the indication for its subsequent use.

Some good clinicians go so far as to say that even in advanced cases rest comprises 50% of treatment. Patients with advanced cardiac failure require a comfortable bed which should be equipped with a head rest. Some who are extremely dyspneic prefer to sit upright, which may be beneficial as this position lowers the diaphragm, aids in removing torsion on the great vessels and permits a more effective action of the accessory muscles of inspiration. For the almost invariable restlessness at night morphin sulphate, $\frac{1}{4}$ gr., repeated in 4 hours, may suffice. It is well to remember, however, that many of these patients are in for a long siege and the drug should not be used indiscriminately. Day restlessness may be quieted by luminal, $1\frac{1}{2}$ gr.,

after meals. Cough may be controlled by codein in $\frac{1}{2}$ gr. doses by mouth. For patients with hypertension, nitroglycerin may be administered by placing a 1/100 gr. tablet under the tongue every 2 hours while the patient is awake. A moderate decrease in blood pressure may be encouraged but long continued use of drugs is not advised as their action may favor the accumulation of effusions.

The diet must contain sufficient calories to supply enough energy and yet be easily assimilated. In cases with edema the diet should be salt-free and the fluids should be restricted. Although carbohydrates in excess produce flatulency, some patients do well on carbohydrates in moderate quantity. With this in mind, a diet is being used in the University Hospital whereby the patient receives daily 2100 calories. It consists of 44 gm. protein, 110 gm. fat, and 222 gm. carbohydrate. This is supplied in the form of fruit juices, vegetable purées, milk, cream, butter, eggs and cooked cereals, the carbohydrate being increased by the addition of sugars such as dextri maltose, glucose and lactose. Excessive fermentation and gastric retention are avoided by giving frequent small feedings.

Although diet and digitalis have major rôles in relieving the embarrassed circulation, some cases presenting extreme dyspnea, cyanosis and anasarca require venesection and removal of fluid from chest and abdomen. Before a venesection it should be ascertained that the patient is not anemic. Morphine sulphate, $\frac{1}{4}$ gr., may be given for stabilization, after which 500 c.c. is withdrawn from the median basalic vein. Aspiration of the chest and abdominal paracentesis may be then carried out, novocain being used to reduce the distress of the procedure. It is well to explain that aspiration of the chest is attended by some danger.

Digitalis seems to be the most reliable drug but its use should be restricted to cardiac failure. Murmurs, extra systoles, hypertension and similar disturbances are not per se indications for its administration. It should be given in a glass graduated for minim doses, as the usual drop method is inaccurate; 40 to 50 drops corresponds to about 15 to 20 minims. The size of the dose is determined by study of the individual case and it is of prime importance to ascertain whether the patient has been receiving the drug previously and is thus partially digitalized. Adult cardiac patients in extremis generally require large doses. It is safe to give 1 dram of the tincture at once, repeat in 8 hours, and follow with 20 minim doses three times a day.

In cases exhibiting auricular fibrillation one must take the cardiac rate at the apex daily. When it is reduced to 70 or 80, the dose should be halved or, if necessary, withdrawn for a time. In some cases where fluids are removed slowly theocin, the synthetic preparation of theophyllin, may be used as an adjunct of digitalis, but because of its irritating action on the gastro-intestinal tract, it must be discontinued in a relatively short time. Good results have been obtained, especially in arteriosclerosis, with euphyllin, a very soluble theophyllin preparation which may be given over long periods without producing gastro-intestinal disturbances. Theobromin and theophyllin likewise have a definite dilating effect on the coronary arteries. Novasural, because of its toxicity, is not used until other measures have been exhausted, but it is a useful drug in advanced failure with edema. It is advisable to start with small intravenous doses, 0.25 to 0.5

c.c., to prevent intense gastro-enteritis. The dose may be increased to 2 c.c., but it is rarely necessary to give over 1 c.c. twice a week.

When one has made sure that vomiting in a patient is a symptom of cardiac failure, it is well to withdraw digitalis for a day or two, after which it may sometimes be resumed without difficulty. If this plan does not meet with success, one may resort to rectal use of the drug, or strophanthus may be substituted. Quinidin should never be used in advanced cases of cardiac failure. After the patient's cardiovascular system has been stabilized, small doses of digitalis may be continued; 20 minims at bedtime is easily eliminated and is frequently sufficient to keep the cardiac rate at the desired level.

During the later convalescent period, when the patient is free from symptoms, the time is opportune for removal of definite foci of infection which might otherwise be continuously impairing the activity of a damaged heart.

Communications

The Hebrew Medical Journal

"The Hebrew Physicians", (HaRofeh HoIvree), the only medical journal published outside of Palestine which is written in Hebrew, has just made its initial appearance.

This Journal is under the editorship of Dr. Moses Einhorn and Dr. A. Goldenstein. It contains articles on general medical subjects and has a special section devoted to new Hebrew medical terminology. All physicians who are interested in this journal are requested to communicate with the editors, addressing them c/o "The Hebrew Physician", 286 West 86th Street, New York City.

Catholic Hospital Association

The Thirteenth Annual Convention of the Catholic Hospital Association of the United States and Canada and the Second Annual Hospital Clinical Congress of North America will be held in the Cincinnati Music Hall, Cincinnati, Ohio, June 18-22, inclusive, 1928. The Fourth Annual Convention of the International Guild of Nurses will be held at the same time, in the same building, at night meetings.

This Convention and Congress will be one of the largest and most important hospital meetings of the year, and will comprise general scientific meetings, special clinics or demonstrations of hospital departments, and 300 special commercial and educational exhibits. Outstanding authorities in medicine, surgery, pathology, nursing, dietetics and hospital administration, architecture and engineering, will lecture and demonstrate in specially planned clinics representing the various departments of the modern hospital. A professional program of the largest interest and value is now being formulated, and all persons interested in medical and hospital service are cordially invited to attend. Further information may be obtained from John R. Hughes, M. D., Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wisconsin, who is General Chairman of the Convention and Congress.

Medical Book Reviews

(Royce Paddock, M.D., Department Director)

COLLECTED PAPERS BY THE STAFF OF THE HENRY FORD HOSPITAL; First Series, 1915-1925, New York City, 1926. Paul B. Hoeber, Inc.

This first collection of papers from the work of the staff of the Henry Ford Hospital contains a considerable amount of original work on clinical subjects. In nearly all the investigations the laboratory has played a large part, but with a clinical end in view. A few papers are noteworthy in being purely clinical; these include a study of the diagnostic criteria of duodenal ulcer, and some very practical remarks on the efforts toward simplification of obstetric care.

In general, the volume presents a large amount of original data, mostly very well arranged. Among the larger items several subjects stand out. The treatment of severe burns with tannic acid, and the treatment of empyema with gentian violet represent 2 reports of the modern efforts being made to improve treatment of these conditions. A rather complete investigation of the eclamptic state, with numerous data on the blood chemical findings, brings out as a main finding the general lowering of almost all the blood chemical figures in all pregnancies, due to dilution and increased volume of the blood in this condition. Needless to say, the cause of eclampsia was not found, but some valuable information obtained.

Regarding more theoretic work, the relation of the blood phosphates to carbohydrate metabolism is well brought out. Some possible practical applications in diagnosis are suggested.

POTASSIUM AND TARTRATES. A Review of the Literature on Their Physiologic Effects. R. W. Webster. With a Digest and Bibliography of the Literature by W. A. Brennan. Chicago, 1927. The Commonwealth Press. Price \$2.50.

The short review by Dr. Webster titled as above is published as a small book. It presents in convenient form many findings widely scattered in the texts and journals of the past quarter century, and fewer but yet important data reaching as far back as 100 years. The bibliography with short digest notes is unusually complete.

In the few pages devoted to the review itself, the conclusions reached are about as follows: Potassium is well known to have a definitely toxic effect when introduced by intravenous or other methods which avoid the alimentary route. This action is exerted upon nerve and muscle tissue, the heart and the circulatory system. Retention of potassium in solution in the blood may lead to certain toxic phenomena, such as are manifested in uremia. Administration of potassium salts by mouth does not ordinarily lead to any toxic phenomena because elimination by the kidney outstrips the rate of absorption from the alimentary tract. When the elimination by kidney is slowed down, as in renal insufficiency from any cause, potassium may accumulate in the blood in amounts sufficient to cause toxic effect.

Tartrates in sufficient dosage by any route may cause nephritis. While in the amounts of Rochelle salts usually given (average 2 drams) there is not enough potassium sodium tartrate to cause any degree of nephritis whatever, in healthy persons, as indicated by albuminuria, all tartrates should

be used with caution in cases showing renal disturbance, and especially the potassium tartrates. In the case of Seidlitz powders, the tartaric acid gives a greater hazard. Several cases of poisoning by Seidlitz powders are reported.

In Lighter Vein

Windfall

An honest speeder had just lit a dog and had returned to settle his damages, if possible. He looked at the dog a moment and addressed the man with a gun.

"Looks as if I'd killed yer dog."

"Certainly looks that way."

"Very valuable dog?"

"Not very."

"Will five dollars be enough?"

"Well—I guess so."

"Sorry to have broken up your hunt," said the motorist pleasantly as he handed the owner a crisp five-dollar bill.

"I wasn't going hunting—jest going out in the woods to shoot the dog."—Tawney Kat.

Unsung Hero

Nitt—"One I saved a man's life, but I never got a medal for it."

Witt—"Give particulars, please."

"An inebriate once came home to his apartment and turned on only the hot water to take a bath in, and he would have been scalded to death, only I happened to be janitor of the building and there was no hot water."—Judge.

Lathered Language

Two women met while down at the corner shopping. Said one:

"I made an awful mistake this morning. I gave my husband a dish of Lux by mistake for cornflakes!"

The other was properly horrified. "Was he mad?" she asked.

"Was he mad?" repeated the first: "I'll say he was mad. He foamed at the mouth."—Boston Herald.

Permanence Defined

Permanent waving. Guaranteed six months.
—Beauty ad.

Perfect Prescription

"I say, old dear, what's good for biting fingernails?"

"Sharp teeth, silly."—Western Reserve Red Cat.

Wanted: A Medal from Mayor Thompson

"Why don't you get an alienist to examine your son?"

"No, sir! An American doctor is good enough for me."—Pointer.

Royal Family

Auto Tourist—"I clearly had the right of way when this man ran into me, and yet you say I was to blame."

Local Cop—"You certainly was."

Autoist—"Why?"

Local Cop—"Because his father is Mayor, his brother is chief of police, and I'm engaged to his sister."—Open Road.

Current Events

REPORT OF THE WELFARE COMMITTEE

Trenton, N. J., Jan. 15, 1928.

In accordance with official call, duly issued, the Welfare Committee held a special meeting in the Princeton Room, Stacy-Trent Hotel, Trenton, N. J., Sunday, January 15, at 3 p. m., the chairman, Dr. Andrew F. McBride, presiding.

Roll call disclosed the presence of the following members: Bloom, Clayton, A. H. Coleman, J. G. Coleman, Conaway, Cosgrove, Costill, Davis, Donohoe, Ely, Green, Guion, Haggerty, Haussling, Hunter, Larkey, Lathrope, Lippincott, Londrigan, Lyon, McBride, McMahan, Morrison, Morrow, Remer, Ryan, Schaufler, Schureman, Sherman, and a telegram of excuse from Clarence Way.

The Chairman introduced as guests Dr. Harold Rypins, Secretary of the New York State Board of Medical Examiners; and Mr. F. J. Osborne, Chairman of the Statewide Antidiphtheria Campaign Committee.

The Secretary, being called upon, read the following report:

Secretary's Report to the Welfare Committee

Trenton, N. J., Jan. 15, 1928.

Gentlemen:

It is our pleasure to report that work in the office of the Editor and Executive Secretary has been very active since our last meeting and that we believe all of our several tasks to be in a satisfactory state of advancement at the present moment. Before submitting a classified account of this work, we should like to report upon some unfinished matters carried over from the last meeting of this committee.

(1) Unfinished Business:

(a) On October 26, 1927, Dr. McBride appointed as a subcommittee on Crippled Children's Survey, to confer with Mr. Buch, Chairman of the State Commission, Drs. W. G. Schaufler, John F. Hagerty, and James S. Green.

(b) Committee on Expert Testimony—Drs. George H. Lathrope, F. R. Haussling, Joseph F. Londrigan, B. Van D. Hedges, and J. B. Morrison.

(c) All of these appointees were duly notified and have accepted tasks assigned to them.

(2) Vote Upon Questionnaire. You will recall that a number of subjects under discussion at the last meeting were not submitted to definite decision at that time, but the Secretary was instructed to supply each member with a mimeographed copy of his report and to request a vote by mail upon the several questions requiring action. Copy of the Secretary's Report and of the complete minutes of that meeting were distributed to members shortly after the meeting and, on October 19, a letter was mailed to each member requesting a vote upon 6 specific questions. The Welfare Committee is composed of 36 members and we have received back 24 ballots; 2 members, one of whom voted and one did not, have expressed dissatisfaction with this method of voting upon important matters; 12 members, exactly one-third of the committee, have not responded in any manner.

Analysis of the 24 ballots returned shows the following results:

Question No. 1, endorsing county society demonstrations of periodic health examinations at county fairs—22 in favor of the plan, 1 opposed, and 1 in doubt.

Question No. 2, adoption of the office card described by Dr. Knight and consideration of the advisability of supplying such cards freely to members of the state society—23 in favor of endorsing the card, but 6 were opposed to burdening the society with the expense of supplying these cards, advising that such members as wish to adopt the plan shall furnish their own cards.

Question No. 3, authorizing the Secretary to put out a second edition of the Primer—received a unanimously favorable vote.

Question No. 4, constituting an invitation to members of the committee to take part in the radio broadcasting program—9 expressed a willingness to participate, 4 agreed to do so if necessary, while 11 declined the invitation.

Question No. 5, relating to the proposed law for annual registration of physicians—received 16 affirmative votes, 6 in the negative and 2 members preferred to withhold opinion until they could read the actual bill.

Question No. 6, suggesting publication in pamphlet form of the Journal articles on "Regulation of Physicians by Law"—23 votes in favor of doing so and 1 vote in opposition.

It was absolutely essential that action should be taken upon some of these questions and in view of the fact that 24 out of the 36 members had registered their votes, we decided that it would be fair to proceed with any question that had received approval of a majority of the membership—not merely a majority of those voting. In consequence, we have proceeded as follows:

The county fair proposition has been submitted to the secretaries of all the county societies with the request that they ask their organizations to consider the advisability of taking up this method of demonstrating periodic health examinations; description of the Knight office card has been published in the Journal but procurement of such cards has been left to individual members; special invitations to some of the committee members to deliver health talks by radio have been extended and accepted, and others will be appealed to later; 5000 additional copies of the "Primer" were purchased and are being distributed through the women's auxiliaries and various lay organizations; pamphlet publication of the articles on Regulation of Physicians by Law, although having received almost unanimous support, has been delayed because: first, the Editor has not had time to devote to this work, and secondly, because he doubts if it can be done within the balance of the appropriation made by the Budget Committee for use of the Welfare Committee this year. The final question, regarding the proposed law for registration of physicians will be presented here today for discussion.

(3) County Society Work. Traveling with President Conaway and Secretary Morrison whenever possible, and making visits alone when necessary, the Executive Secretary has so far during this fiscal year made 21 visits to 16 of the county medical societies and it is a pleasure to report that at present all of our county so-

cieties are in a flourishing condition. It is now almost certain that during the year Drs. Conaway and Morrison will each succeed in visiting every county medical society in the state, and we are able now to report that in many of the counties so far visited the effect of their counsel is very striking. At our request, most of the county societies have adopted resolutions specifically endorsing the Antidiphtheria Campaign and pledging their members to support the work of the campaign committee; this action having been requested because the committee encountered opposition in some places where members of the profession seemed unaware of the fact that this movement had been initiated by the state medical society. A communication has also been addressed to each county medical society secretary inviting him to serve on the local county campaign committee which is shortly to be appointed by the Chairman of the Antidiphtheria Campaign.

There are 2 other matters that should first be approved by this body.

(a) The New Jersey Tuberculosis League writes as follows:

"As you are aware, the New Jersey Tuberculosis League will participate in an Early Diagnosis Campaign led by the National Tuberculosis Association and planned for March of this year. The purpose and plan of the campaign is outlined in the enclosed circular, 'A Nation Wide Campaign for the Early Diagnosis of Tuberculosis'.

You will appreciate that the success of the campaign in New Jersey will be measured by the degree of active interest and coöperation secured from the members of the medical profession. To obtain this interest we have several methods of procedure in mind. The securing of the endorsement of state and county medical societies is of course of fundamental importance to us.

The film, 'The Doctor Decides', described in the enclosed sample sheet, will be available for medical groups, accompanied when requested by a speaker who is recognized as an authority on the subject.

The pamphlet, 'The Early Diagnosis of Tuberculosis—An appeal to the medical profession', has been ordered in sufficient quantity to supply every physician in the state and we are anxious to make its distribution as efficient as possible. Do you think that the county medical societies would be willing to distribute these to their members?

Can you give us at your earliest convenience your endorsement, or the endorsement of the Medical Society, of the campaign so that we can use it in approaching the county medical societies and in our publicity?"

Will you kindly determine today whether we shall be authorized to pass this on to the county societies?

(b) Medical Relief in Disaster. To put into effect the plan devised by the American Medical Association and the American Red Cross, adopted by the House of Delegates of the A. M. A. in 1926, and approved by the House of Delegates of the Medical Society of New Jersey in 1927, we ask authorization to inform the county societies of the following scheme of organization to supply immediate medical relief in the event of any disaster calling for state or county action.

Briefly described, the plan is as follows:

The state director of medical relief in disaster shall be the President of the State Medical Society.

In the counties, the president of the county medical society shall be the director of such local relief work. The function of the county director will be to assume charge—act as captain—in systematizing, directing and controlling activities in immediate medical relief. He should feel that he is responsible for the direction not only of local members of the profession but also of volunteers who come in; the great difficulty having been in such situations that under existing conditions no one felt that he could with propriety assume the direction of affairs.

The function of the President of the State Society, as director of disaster relief, shall be to see that the presidents of the county societies live up to their responsibilities, to coöperate with them in every way possible, and to act as a central officer through whom, in case of necessity, the national director of disaster relief or any outside organization may take up matters, particularly matters calling for attention to members of the profession as a whole; the secretary, or general manager, of the American Medical Association, as national director of disaster relief, and the presidents of state societies shall be liaison officers between the national headquarters of the A. M. A., state headquarters, and component county societies.

(4) Educational Work. Since our last meeting, radio station WHAR has suspended business but we were able to transfer our program to station WPG, of Atlantic City, and after a brief interruption, to procure allotment of the old time, 15 minutes each Friday evening, commencing at 7:45. Our program of preventive medicine has been arranged as far in advance as March and we think it can easily be carried through April at least. These talks are being mimeographed and distributed to 150 papers throughout the state; we cannot keep tab on all these papers but if your county paper is not printing them, please inquire why? Your assistance may aid us in extending this program.

In the matter of addressing lay organizations, our assistant has appeared before a goodly number of women's clubs, is visiting all of the women's auxiliaries, and will be glad to fill any engagement that you, as members of the committee, may secure in your county for her.

(5) Tristate Conference. The eighth session of the Tristate Medical Conference will be held in New York, Saturday, February 4, to discuss the important problem of expert testimony; the subject to be introduced by Mr. Paul Lloyd Stryker, Legal Adviser to the New York Medical Society, and the discussion to be opened, for New Jersey, by Dr. Lathrope, Chairman of your subcommittee to deal with this matter.

At the last meeting of the secretaries of state medical societies, held in Chicago in November, Dr. Morrison, at the request of officers of the A. M. A., presented a report upon the establishment and development of these district conferences and we learned then that the New England States have adopted the plan for their territory and that several groups of neighboring states in the western and midwestern sections of the country are considering adoption of a similar policy.

(6) Office Equipment. We are constrained to ask the Welfare Committee to supply us with some additional office equipment. The very large amount of mimeographing performed during the past 2 years threatens to ruin our Royal typewriter and we believe it would be a good investment to purchase a second-hand machine to be used in this work and thus leave the present office machine for letter work. Further, it is absolutely necessary to have additional filing cabinets for letters, and a book section or two, as our present cabinet capacity is overloaded. Such a machine as we refer to will cost \$40, and the desired filing cabinets approximately \$50 to \$60 more; making necessary a total appropriation of about \$100. The budget allotment for office expenses barely covers the stenographer's salary, rent of telephone, required stationery supplies and postage, and we have no other funds available for use this year. As the major portion of the work concerned with the desired equipment is performed for this committee, we think it fair to request that this expenditure shall be borne from the budget of the Welfare Committee.

(Signed) Henry O. Reik.

Dr. Costill moved that the report be received. This motion was amended by Dr. Schauffler to add that the program outlined therein be endorsed, and the amended motion was adopted.

Upon motion of Dr. Guion, the appropriation of \$100, or so much thereof as may be necessary, requested in the Secretary's Report, was approved. Also upon motion of Dr. Guion, the Early Diagnosis Campaign of the New Jersey Tuberculosis League was endorsed and the Secretary was instructed to take such action as he might see fit in connection therewith.

The Chairman: Will the committee on automobile drivers' licenses report?

Dr. Sherman: Your committee reports that progress has been made, that the Commissioner of Motor Vehicles has terminated his agreement with the optometrists regarding visual tests of applicants for license, and that, in response to his request, we have prepared medical application blanks which each applicant is expected to have endorsed by a physician to present along with his application for driver's license. Mr. Dill has accepted the form prepared by us and will adopt it as soon as possible. The forms which we have prepared are as follows:

Questions to Be Answered by Applicant for Driver's License

Note: The answers to these questions are partly for the information of the examining physician. Unfavorable answers will not necessarily result in withholding a license.

1. Age
2. Are you subject to: dizzy spells? fainting attacks? fits or convulsions? pain around the heart?
3. Have you any serious disease of the heart or the kidneys?
4. Have you ever had epilepsy?
5. Have you ever had a stroke? or any form of paralysis?
6. Have you any impairment of vision? Is it corrected by glasses?
7. Have you any impairment of hearing?

8. Have you entirely free use of both arms? hands? legs?
9. Have you been examined by a physician during the past year? If so, give name and address of the physician.
10. Are you physically and mentally capable of operating a motor vehicle on the public highways?

I have read and understand these questions, and the answers are true to the best of my knowledge and belief.

(To be signed and sworn to after the physical examination.)

Signature of applicant
 Acknowledged under oath before me this
 day of _____, 192 .

Notary Public.

Physical Examination

(Answers to be filled in by a physician)

1. Is there evidence of heart disease?
If so, what?
2. Systolic blood pressure? (If applicant is over 50 years of age)
3. Vision: right eye _____ left eye _____
(Vision must be at least 20/50 in the better eye and 20/200 in the poorer eye, with or without glasses. If less than 20/200 in one eye, the better eye must have at least 20/30 vision.)
4. Is the hearing good?
5. Has the applicant full use of both arms and legs?

I certify that I have today examined an applicant for a driver's license, and consider that he or she is _____ physically and mentally fit to operate a motor vehicle on the public highways.

M. D.

Date of license to practice medicine
 in New Jersey.

Dr. McEride: Supplementing what Dr. Sherman has briefly reported, I should like to say that Commissioner Dill has agreed to adopt these forms as standards for the Motor Vehicle Department in so far as the law permits. He has expressed his gratitude to our committee for the assistance rendered and wishes that fact made a part of our record.

Dr. Green: Does this standard exclude any man who is wearing an artificial leg? I happen to know a physician in Elizabeth who had one leg amputated at the knee, who wears an artificial limb, but who drives a car as well as most of us and it would be a hardship upon him to be deprived of his driver's license.

Dr. Sherman: We had no notion of doing anything arbitrary nor does the adoption of this plan deprive anyone of a license now in existence. This scheme is to be adopted for the examination of future applicants for license and the answers recorded are solely for the information of the examining physician and the motor vehicle commissioner, and it is, in my opinion, for the latter to decide after all facts are recorded whether an applicant shall or shall not be permitted to drive a car. The entire medical examination is for the information of and must be passed upon by the commissioner. I doubt if the scheme will work out perfectly at

once, expect that disputes will arise, and think that ultimately there will have to be established some sort of a board to deal with doubtful cases.

Dr. Clayton: May I ask why the color test has been omitted from the eye examination? To my mind, that is one of the most important matters to be dealt with. It is surprising how many color-blind people there are in the world and I think this would be considered in view of the fact that traffic regulations now depend so largely upon colored lights.

Dr. Sherman: The committee considered that matter very carefully and decided that it would be unwise to demand application of such a test. One reason has just been stated; i. e., about 4% of all males are color-blind. We wanted to make this examination as simple as possible. Most color-blind people develop some means of determining for themselves the differences between lights and we thought it best to leave out a test that would arouse opposition and be difficult for the general medical examiner to apply. Personally, I feel that the color test is comparatively unimportant, from a practical standpoint.

Dr. Cosgrove: I move that we accept the report and endorse the findings.

Dr. Morrow: In seconding the motion, I want to say that I think this puts us well on the way to periodic health examinations of a large sector of the population.

The motion was unanimously adopted.

The Chairman: I shall now ask Dr. Kelley, Secretary of the State Board of Medical Examiners, to explain to us the desire of his Board for the annual registration of physicians and to read the Act which they offer for submission to the Legislature.

Dr. Kelley then presented and explained in detail the proposed law.

The Chairman: We are very pleased to have with us Dr. Harold Rypins, Secretary of the New York State Board of Medical Examiners, and I shall be glad if he will tell us something of New York's experience with this law.

Dr. Rypins: About 2 years ago, the medical profession of New York was in just the position you find yourselves today; the largest county society in the state was opposed to this legislation. We have since secured enactment of the law and it has been in operation a little less than 2 years. Here, as in New York, certain hypothetical objections have been raised against the bill while its main features are overlooked. The first objection was that if a physician did not comply with the law he might lose his license; that was not a sound objection because our bill provided that nothing therein should deprive any man of his right to practice medicine; even should he leave the state for a time he could, upon his return, resume practice upon the payment for re-registration. The second objection concerned penalty for nonregistration: I understand the provision in the law proposed by Dr. Kelley is for a penalty of \$50, and I think that is too severe and quite unnecessary. We have had 9 different laws requiring registration for members of other professions in New York and have never had occasion to force a penalty. Among the dentists, only 1 has been fined because he refused for years to pay a license fee. Any penalty prescribed in your law should be a nominal one and enforceable at the discretion of the Board. In the New York law, the penalty is \$2 a month for the first 2 months, and after that, \$5 a day,

but we have never collected five cents from that source.

Now, the objection that it is wrong in principle for the physician to be taxed to supply the funds for enforcing this law is undoubtedly a sound one. But, gentlemen, if you have approximately 6000 practicing physicians in this state, there is no doubt that you have approximately 2000 quacks among you. Which is more important, to take action that will help to get rid of the quacks that are inimical to the public health and to the proper functioning of your profession, or to stand on your dignity and refuse to pay into a fund which the state will not appropriate? Dr. Kelley, in the course of his argument, said that his Board advocates this bill because of its advantage to the medical profession. I think that is a minor point and that you should take such action primarily because it is in the interest of the public welfare, though I do believe that such an investment will come back to you in a business sense.

As to the accomplishments in New York State, we registered in the first year 17,600 physicians and immediately we began to discover that there had been, all over the state, persons engaged in the practice of medicine illegally simply because nobody had ever inquired about them. As soon as our list was published, legalized practitioners began to inquire about their neighbors whose names were not on the list. I do not know exactly how many quacks we have sent out of New York into New Jersey but venture the guess that it is a goodly number because many of them probably wanted to remain close to the Hudson River where they could slip over into New York for occasional practice. I believe that we have within the year run out of New York State no less than 1000 quacks. Where have they gone? To the nearest point where they could find refuge and make a living.

I have been amazed at the amount of prosecuting done by your New Jersey Board with the funds available, but I suspect that each prosecution by them was only about one-fifth as valuable as one of our prosecutions, because in each instance they possibly succeed in putting 1 quack out of business whereas when we prosecute 1 man, from 5 to 10 others move as a result of the publicity gained and the attention directed to the registration lists to see whether others in the vicinity are properly licensed to practice. You have what is perhaps the most efficient medical practice prosecuting body in the United States but they cannot do a complete job without men and money. This proposed law will supply the Board with the necessary funds.

In conclusion, I want to say that the county society which most vigorously opposed us in the beginning is now convinced of the value of the law; and, incidentally, we found the greatest number of quacks practicing in that county. We have received much public commendation from the laity for the enactment and enforcement of this law.

Dr. McBride: The proposition, submitted by the Board of Medical Examiners to the House of Delegates of the State Medical Society in June, was endorsed by that body and referred to this committee for action. A large majority of the members of this committee have by letter endorsed the proposition. I believe that a large majority of the county medical societies, all but 2 of those that have taken action, have specifically endorsed the idea. But, inasmuch as opposition

has been expressed by 2 county societies and may exist in some of those that have not acted, and deeming it unwise to go before the Legislature with any medical bill without an attempt to unite all our forces, I think it might be wise to make a special effort to explain this matter more fully to the opponents and to try to win their support for the bill. A number of us who now favor this legislation were opposed to it 2 or 3 years ago.

General Discussion

Following a general discussion, participated in by Drs. Morrison, Haussling, Sherman, Cosgrove, Londrigan, Larkey, Rypins, Kelley, Ely, Guion Costill, Coleman, Leo Haggerty, Green and Schaufler, a motion was made by Dr. Costill, amended by Dr. Green, and seconded by Dr. Schaufler, to provide that a special meeting of the Welfare Committee should be held at Newark, in the Academy of Medicine of Northern New Jersey, Sunday afternoon, January 29, and that all the members of the Essex, Hudson and Middlesex component county medical societies should be specially invited to attend that meeting and to participate in the consideration and discussion of this proposed legislation. This motion was unanimously adopted.

Dr. Londrigan: I should like the Welfare Committee to consider a question relating to accident and liability cases brought into general hospitals. It not infrequently happens that lawsuits result from these cases and that everybody concerned except the hospital and the attending physician are protected by law. The attorneys have a law which provides for payment of their services through a prior lien on the damages and I think that the hospital and the physician should be protected in similar manner. I, therefore, move that this question be submitted to a special committee for consideration.

The motion was seconded and adopted and the Chair appointed Drs. Londrigan, Morrison and Ely.

Dr. Hunter: Mr. Chairman, whatever our action may be ultimately with regard to the proposed bill for annual registration of physicians, I move that it shall be the general policy of the committee for this year to "stand by", on the defensive, as regards legislation.

The meeting then adjourned.

Henry O. Reik, M. D.,
Secretary.

SPECIAL WELFARE COMMITTEE MEETING

Newark, N. J., Jan. 29, 1928.

Pursuant to a call, duly issued, a special meeting of the Welfare Committee of the Medical Society of New Jersey, was held at the Academy of Medicine, 91 Lincoln Park, Newark, Sunday afternoon, January 29, being called to order at 3.15 p. m., by Dr. Andrew F. McBride, chairman.

This meeting was called for the special purpose of discussing the proposed "annual registration of physicians" bill sponsored by the Board of Medical Examiners, and invitations to attend the meeting were addressed particularly to all members of Essex, Hudson and Middlesex county medical societies.

Upon call of the roll the following members of the Welfare Committee responded: Cosgrove, Ganley, Green, John F. Hagerty, Haussling, Lath-

rope, Londrigan, McMahon, Morrison, Morrow, Ramsey, Schaufler, Schureman and Sherman; letter of excuse was received from Dr. Clayton.

The following named members of the Essex, Hudson and Middlesex county societies registered as being present:

Essex County: Drs. Wells P. Eagleton, E. G. Wherry, E. S. Sherman, William A. Tansey, W. H. Huber, B. H. Greenfield, H. Alton Schachter, Eugene V. Parsonnet, Max Danzis, Edward J. Ill, F. W. Pinneo, Charles V. Craster, H. A. Tarbell, A. C. Zehnder, F. L. Martine, W. J. Houck, J. V. Bissett, Halur, C. C. Beling, Guy Payne, Charles Englander, S. H. Baldwin, William J. Donahue, E. LeRoy Wood, Henry B. Orton, Henry C. Barkhorn, Joseph A. Clarcken, Alfred Stahl, Frederick J. Wort, A. G. Reinfeld, Edgar Ill, Charles L. O'Neill, Marcus H. Greifinger, Richard H. Dieffenbach, Daniel Elliot.

Hudson County: Drs. Harry J. Perlberg, S. A. Reich, E. J. Luippold, Charles V. Niemeyer, William J. Sweeney, J. S. Reitnauer, F. J. Quigley, Henry Spence, Joseph F. Londrigan, S. A. Cosgrove.

Middlesex County: Drs. Louis F. Wetterberg, Frank C. Henry, R. B. Walker, Benjamin F. Slobodien, F. M. Hoffman, Frank C. Henry, Jr., J. F. McGovern, R. L. McKiernan, J. M. Gutowski, W. A. McCormick, J. J. Mann.

Drs. Arcangelo Liva, of Bergen County, J. J. McGuire, of Mercer County, and Walter M. Bartlett, of Morris County, (New Jersey State Board members) were in attendance.

Dr. McBride explained the reason for calling this special meeting:

"Despite the fact that a majority of the counties have endorsed this proposed legislation and that a majority of the Welfare Committee members have expressed approval thereof; and dominated by a desire to promote harmony within the profession and if possible to present a united front in dealing with the legislation of such important character, it was decided to hold a special meeting of the Welfare Committee and to invite all members of the Essex, Hudson and Middlesex county medical societies to attend that session to hear the proposed "Act" presented and explained, and to participate in discussions of the need for and desirability of such legislation."

Dr. Charles B. Kelley, Secretary of the Board of Medical Examiners, then read the proposed Act as prepared for submission to the Legislature, explained its various features and presented the Board's reasons for believing this to be a desirable piece of legislation.

Drs. McGuire and Liva also spoke for the Board in support of the proposed bill. They were followed by Dr. J. B. Morrison, who explained the action of the House of Delegates in regard to this matter and the action since taken by the county societies, a very large majority of which had endorsed the proposition.

Drs. Edward J. Ill, Wells P. Eagleton, William E. Ramsey, S. A. Cosgrove, Max Danzis, Henry C. Barkhorn, John F. Hagerty and F. J. Quigley all spoke strongly in opposition to the proposed law. Drs. Henry Spence, James S. Green, and W. G. Schaufler answered some of the objections presented, and favored support of the bill.

Dr. Harold Rypins, Secretary of the Board of Examiners of New York State, present by special invitation, explained the New York law and the good results which he believes have already

grown out of it, and expressed the hope that New Jersey would join with New York and Pennsylvania in the establishment of annual registration of physicians.

At the close of Dr. Rypins' address, he answered a number of questions from the floor, and at 6.30 p. m. the meeting adjourned.

Henry O. Reik,
Secretary.

The Woman's Auxiliary

Each month marks some new step in advance for the auxiliaries. During February, at a special meeting of the Morris County Medical Society, provision was made for the organization of a Woman's Auxiliary to that Society. Only one county medical society in the state remains to be convinced of the importance of this movement and the Editor has engaged to confer with that society at its next meeting, which will be held in April. Actual organization is yet to be conducted in 3 counties whose societies have authorized such procedure. It is earnestly hoped, and now seems quite probable that every county in the state will have an organized auxiliary by the time that the State Medical Society meets in June.

This does not mean that our work is completed or even satisfactorily established. In most counties we have merely gotten started; i. e., we have a formal organization but there remains the task of bringing into membership all eligible women in the county, and the larger labor of getting the new societies to function properly. All this will require time but the outlook is now encouraging.

State Society Auxiliary

Mrs. A. L. Stillwell, State Auxiliary Secretary.

A meeting of the Executive Committee of the Woman's Auxiliary of the Medical Society of New Jersey was held in Trenton Monday, January 30, 1928. Presidents and secretaries of county auxiliaries were present by invitation. The business session was preceded by a luncheon at the Carteret Club. A delightful program of instrumental and vocal solos was provided by the local committee.

Mrs. A. Haines Lippincott, of Camden, President of the State Organization, called the meeting to order and with her gracious words of welcome and appreciation also spoke of the honor it is to be the wife of a physician and of the many hitherto unthought of opportunities for service to humanity, which such position offers.

Dr. Henry O. Reik, Executive Secretary of the State Medical Society, was a guest and when asked to speak recited a history of the slow but sure development of the Woman's Auxiliary, which had grown out of a request from one of the state societies for such an organization. Dr. Reik was decidedly optimistic concerning the growth and usefulness of the infant organization. He spoke of the many opportunities for service along educational lines, preventive work, urging of periodic health examinations, etc. The State Medical Society provides able speakers, well qualified to give valuable information in a pleasing way and Dr. Reik urged that opportunities be

secured for them to address women's clubs or any other available organization where these pertinent subjects may be brought before the people.

The president called for short reports from each county president concerning their work, problems and helpful suggestions as well. Seventeen counties were represented—in all 47 delegates. It is the aim of the organizing committee, Mrs. Barbash, of Atlantic City, chairman, that the counties will be 100% organized by June 6, when the annual meeting occurs in Atlantic City. The executive committee has been asked by the State Medical Society to have charge of the entertainment features at the convention. Receptions, card party and trips are being arranged. The above plans, together with close proximity of the "grand old ocean", offer to the wives and members of families of the medical men of New Jersey a program of worth while pleasures as well as study of plans and opportunities for service in line with the work in which, because of the "relationship which we bear to the profession", we have long been more or less interested.

Atlantic County

Mrs. L. A. Wilson, Secretary.

The Women's Auxiliary to the Atlantic County Medical Society met at the home of Mrs. W. Blair Stewart, Friday, February 10.

Mrs. Stewart's guests were: Dr. and Mrs. William Carrington, Mrs. Charles Ulmer, Dr. and Mrs. Charles Kaighn, Dr. and Mrs. Walter Stewart, Dr. and Mrs. Herbert Griffin, Mrs. Herman Mathis, Dr. and Mrs. Mark Haley, Dr. and Mrs. Laurence A. Wilson, Dr. and Mrs. Robert Bradley, Dr. Clara K. Bartlett, Dr. and Mrs. William C. Wescott, Dr. and Mrs. Sidney Rosenblatt, Dr. and Mrs. Thomas G. Dunlap, Dr. and Mrs. W. Blair Stewart, Dr. and Mrs. Samuel Barbash, Dr. and Mrs. Carl Surran, Dr. and Mrs. D. W. Scanlan, Dr. and Mrs. L. M. Walker, Dr. and Mrs. Edward F. Uzzell, Mrs. Percy Joy, Dr. and Mrs. Edwin H. Harvey, Dr. and Mrs. Edward Guion, Dr. and Mrs. Morris Chester, Dr. and Mrs. William Martin, Dr. and Mrs. John T. Beckwith, and Dr. and Mrs. John F. Massey.

Roll call showed nineteen active and six eligible members present.

Secretary's report approved as read and the treasurer's report followed.

Mrs. John F. Massey gave a very complete and enthusiastic account of the midyear Executive meeting held in Trenton, January 30. It was moved and carried that the report be recorded and filed.

Mrs. Giffin, of Rochester, Minn., was asked what in her opinion constituted success for any young organization. Mrs. Giffin brought to light many good points based on the success of the Magazine Club of the Mayo Clinic. Namely: To keep everyone interested by dividing the Club into sections for Current Events, Dramatics, Music, and Literary Reviews. We are all grateful to Mrs. Giffin for her helpful suggestions.

Mrs. Carrington was asked to make an appointment for Mrs. Taneyhill to lecture to the Parent-Teacher Association of Ventnor. This is just a beginning of what we hope to do through our Welfare and Educational Committee.

There was some discussion as to whether we would have a purely social affair every month saving the business for the next meeting or con-

tinue as we have been doing, the business first and the remainder of the time for social enjoyment. The decision we left with the Social Committee for the next meeting.

After adjournment the doctors joined us for a very pleasant evening at the close of which delicious refreshments were served.

The next meeting, I believe, is to be held at the home of Mrs. W. J. Carrington, 12 Somerset Avenue, Atlantic City.

Essex County

Mrs. George A. Rogers, Reporter.

The Woman's Auxiliary to the Essex County Medical Society held a regular meeting on Monday, January 23, at the Academy of Medicine, Newark.

After the regular business was disposed of, there was a discussion as to how often this auxiliary should hold meetings, and the question will be decided at the February meeting.

The attendance of members was excellent, and many guests from other societies also enjoyed Mrs. Taneyhill's very interesting lecture on "Periodic Health Examinations".

Through these visitors, 2 other engagements have been made for Mrs. Taneyhill to deliver this same lecture to groups of women less familiar with the subject than the wives of physicians. This is one of the ways in which we are trying to spread the gospel of health.

Hudson County

Mrs. D. T. Winter, Secretary.

The Woman's Auxiliary to the Hudson County Medical Society was organized on May 11, 1927. The officers are as follows: President, Mrs. William Freile; First Vice-President, Mrs. Stanley R. Woodruff; Second Vice-President, Mrs. James Murphy; Treasurer, Mrs. J. Searle McDede; Secretary, Mrs. Daniel T. Winter; Publicity Chairman, Mrs. H. J. Perlberg.

Our meetings were first held on the first Tuesday of each month but had to be changed to the third Friday. We started with 16 members and have slowly grown to 60. We met in private homes until, at the December meeting, it was decided to make arrangements for the Carteret Club at which place we met in January and will continue to do so for the rest of the year.

We have had 2 speakers: Miss Mary Dickerman, Metropolitan Nursing Supervisor of Northern New Jersey, who talked about the work of some of the auxiliaries of the middle West with which she came in contact; and Miss Wilson, Supervising Nurse of the Red Cross Social Service Work, who explained the purpose of her organization.

After our business meetings we have an enjoyable social hour during which tea is served. After this we intend having a speaker one month, cards the next, and a small entertainment the next, trying to make the meetings as interesting as possible.

Gloucester County

Reported by Mrs. I. W. Knight and Mrs. H. B. Diverty.

Three speaking engagements for Mrs. E. C. Taneyhill, with her talk on "Periodic Health

Examinations" were reported by Mrs. J. Harris Underwood, Chairman of the Committee on Public Health Relations, at the meeting of the Auxiliary to the Gloucester County Medical Society, held on Thursday evening, January 19, at the Woodbury Country Club. Mrs. Taneyhill will address at these meetings 2 groups of Women's Club members and a Home Missionary Society, all 3 meetings to be held in March. Plans were discussed for offering this opportunity to other audiences in the county.

Mrs. Duncan Campbell of Woodbury, Chairman of the Committee on Entertainment, reported music furnished for the annual social meeting of the County Medical Society, and tea served at the October meeting of the Auxiliary.

Routine business was conducted by the President, Mrs. James Hunter, Jr., of Westville, and after an evening spent in discussion, the meeting adjourned for a lunch with the members of the Gloucester County Medical Society.

Mercer County

Mrs. J. J. O'Rourke, Secretary.

With only nine eligibles present, the Woman's Auxiliary to the Mercer County Medical Society was organized March 15, 1927, at the Carteret Club, Trenton, New Jersey. Since the formation of this society 4 meetings have been called.

Mrs. Parkes, Past President of the Pennsylvania Auxiliary, gave a very interesting talk before the members of this county at the meeting of April 12, 1927. At this time an initiation fee of \$1.00 and annual dues of \$2.00 were voted as satisfactory.

It has been found agreeable to our members to have luncheon served before the business meetings and a brief entertainment provided. Our first luncheon was held January 25, 1928, and a delightful musical program rendered by Mrs. Charles Waters, member of our Social Committee, and her accompanist.

We anticipate broadening our activities by arranging for illustrated health talks to be given before various Parent-Teachers' Associations.

Passaic County

Mrs. William A. Dwyer, Reporter.

The Women's Auxiliary to the Passaic County Medical Society held its regular meeting at the Health Center in Paterson on February 9.

Representatives of the various Women's Clubs, guests of the Auxiliary, heard an address on "Legislation" by Dr. Andrew F. McBride, Second Vice-President of the State Medical Society and State Labor Commissioner.

Mrs. Orville R. Hagen, Chairman of the Program and Educational Committee, outlined the work until June as follows: Lectures—Dr. Potter, of Valley View Sanitarium; Mrs. Wickes, of the Board of Health; "School Hygiene", Mrs. M. Jeffrey, Principal of Lincoln School, Hawthorne; Miss Elizabeth Watson, "Instruction of Defective Children".

Book Reviews and discussions on the following: Microbe Hunters; Walter Reed and Yellow Fever; The Doctor Looks at the Doctor.

The Social Committee of which Mrs. Schultz is Chairman has planned various forms of entertainment: March—Travel Pictures Taken by

Members While on Vacation. April—A Movie Night, European Pictures. May—Bridge.

Salem Auxiliary

Mrs. William H. James, Secretary.

The Salem County Auxiliary held its regular meeting on Wednesday, February 8, 2 p. m., at the Memorial Hospital. After the transaction of the routine business, we had the pleasure of hearing a talk on "Periodic Health Examinations" by Mrs. Taneyhill, which we greatly enjoyed.

At the close of the meeting we retired to the Johnson Hotel for dinner, as guests of the Salem County Medical Society.

Somerset County

Reported by Mrs. Edgar Flint.

The Women's Auxiliary to the Somerset County Medical Society met at the Court House, Thursday, February 9, with a record attendance. Mrs. E. C. Taneyhill, Assistant Educational Secretary of the Medical Society of New Jersey, gave a very interesting and instructive talk on Periodic Health Examinations.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M. D., Reporter.

The regular monthly meeting of the Atlantic County Medical Society was called to order by the President, Dr. William C. Wescott, on Friday evening, February 10, 1928, at 8.30 o'clock.

Minutes of the previous meeting were read and approved.

Dr. Clarence L. Andrews reported for the Board of Censors. He read a report concerning the alleged unethical conduct of one of the members of the Society and stated that the Committee felt that the member was not responsible for the publicity that had been given him and urged that the matter be dropped. It was moved and seconded that the report be accepted, and the motion was carried.

The Board of Censors approved the application of Dr. L. M. Walker, who was elected to membership.

Dr. Joseph H. Marcus read a letter from the Chamber of Commerce asking that this society appoint a committee of three to meet with committees of other civic bodies to determine as to the advisability of holding the annual pageant in Atlantic City this year. The chair appointed Drs. Quinn, Scanlan and Andrews.

The Secretary also read a letter from the Welfare Committee of the New Jersey State Medical Society outlining a plan for medical relief in any disaster which might call for help. This plan detailed the President of the Atlantic County Society to outline relief measures in case of any emergency.

A letter containing a résumé of the early diagnosis campaign, of tuberculosis, was read and the plans were endorsed by the society.

Dr. Herbert Z. Giffin, of the Mayo Foundation, and Associate Professor of Medicine at the University of Minnesota Medical School, read a paper on "Splenectomy, Its Indications and Results", which in part stated:

The functions of the spleen have been learned from the results of splenectomy. The spleen is a lymphoid organ and is a reservoir for red blood cells. Removal of the spleen causes temporary anemia for 3 or 4 months, following which there is stimulation of the bone marrow. The resistance of the red blood cells is increased following splenectomy and there is less tendency to jaundice; also there is an increase in the endothelial cells of the lymphoid tissue. The anemia is not present in man as in animals after splenectomy. There is a leukocytosis and increased resistance of the red blood cells following splenectomy. Also there is a decrease in the volume of blood in the portal system with a decreased load on the liver and a consequent clearing up of the ascites. The platelets are increased in hemorrhagic purpura after the spleen is removed.

Splenectomy was performed as far back as 1575, for injury, and the ancients found that this organ was not essential to life. There have been cases of congenital absence of the spleen. The ancients said that the removal of the spleen improved a person for exercise. Removal of the spleen in man antedated by 100 years the experimental removal of the spleen in animals.

The diagnosis of a tumor as being spleen must be differentiated from kidney, retroperitoneal tumors, and from the stomach. The spleen may fill the abdomen and be confused with ascites. There have been 490 splenectomies in the Mayo clinic.

Differential diagnosis must be made between splenic anemia; syphilitic splenomegaly; hemolytic jaundice; chronic leukemia; polycythemia vera.

Splenic anemia is simply anemia with splenomegaly, with no specific cause. Must rule out chronic septic splenomegaly, such as results from portal thrombosis, recurrent phlebitis, furunculosis, etc., which give the same picture as splenic anemia, but do not do well after splenectomy. Diagnosis of syphilis of the spleen is made by the Wassermann test. Hemolytic jaundice can be ruled out if there is increased fragility of the red blood cells.

Results of splenectomy in splenic anemia are good provided the patient survives the operative risk. It is a difficult operation because the spleen is large and there is much inflammatory reaction. The mortality is about 11%. The danger of gastro-intestinal hemorrhage is great and may be fatal as long as 6 years after the operation.

Syphilitic splenomegaly has been operated upon if specific treatment is not adequate, and yields very good results. Hemolytic jaundice is cured by splenectomy. Splenectomy is not performed on patients with pernicious anemia, as a rule. Occasionally there is a case of pernicious anemia where the bone marrow is not exhausted, in which splenectomy is indicated but the average case lives longer with the spleen than without it.

Myelogenous leukemia. Life is prolonged by splenectomy, but at the end of the improvement these patients go down much more rapidly.

Hemorrhagic purpura. The results of splenectomy here are very striking. Splenectomy cures hemorrhagic purpura; since 1923, 4 cases have been cured. Bleeding stops immediately after the spleen has been removed, and after splenectomy all focal infections should be cleaned up. Must differentiate acute aplastic anemia in which the bone marrow is reduced. Here hemorrhage comes on late and in hemorrhagic purpura hemorrhage comes on early. In acute aplastic anemia the leukocytes are reduced almost to zero.

The lecture was illustrated with lantern slides.

General Staff of Atlantic City Hospital

Joseph H. Marcus, M. D., Secretary.

The monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium. Friday, February 17, the meeting being called to order by the president, Dr. D. Ward Scanlan.

The scientific program presented was as follows:

Report of Pediatric Service, Dr. Joseph H. Marcus; Report of Laboratory Service, Dr. Robert A. Kilduffe.

In presenting the report of the Pediatric Service, Dr. Marcus stated that: "The type of cases admitted during January, February and March were in keeping with the season of the year, namely, those relating to the respiratory tract; in July, August and September the majority of cases admitted to the ward typified the gastro-intestinal type of illness. The marasmic or atrophic type of infant, as a rule, was put on lactic acid milk, using either the skim milk or whole milk depending upon condition of the gastro-intestinal tract and its receptivity. These cases, of course, did not include patients suffering from acute gastro-intestinal disturbance of parenteral or enteral origin. One of the advantages in the use of whole lactic milk is the high caloric value of each ounce of food so prepared, concentrating on quality and not quantity feeding; however, I have found that this food is more adaptable to hospital than it is to private practice; due to lack of coöperation in a private family in getting the nurse and the mother to exert a sufficient amount of patience in administration of this so called sour milk. Most babies at first display a stubborn attitude when this milk is offered and as a rule 1 to 3 days will elapse before the child has become adapted to its taste, after which very little trouble is experienced. When properly prepared a smooth homogeneous preparation results. The taste and general appearance is the same as ordinary buttermilk. The acidity is Ph4, which degree of acidity almost completely inhibits bacterial growth. Milk prepared in this way keeps well, even if not placed in a refrigerator. Faber, Mariott and his co-workers believe that it is important not to give infants dilute foods, for the reason that the strength of most mixtures has to be varied with the age of the infant because of incapacity of young infants to digest cow's milk and when the high buffer value of cow's milk is diminished by addition of acid, cow's milk is as easily digested as human milk. In order to acidify milk, others use acetic acid, lemon juice, citric, butyric or hydrochloric acid, but Mariott believes that lactic acid is preferable to the others as they tend to cause diarrhea. Corn syrup used with lactic acid milk contains a relatively large amount of easily absorbable carbohydrate. The use of lactic acid has been continued after discharge of the patient; the mother, as a rule, seeing the benefits derived, will be very eager to continue its use."

Dr. Marcus reported a case of "Infantile Facial Eczema" in a baby 6 months of age, involving the scalp as well, in which there was a secondary impetiginous infection which produced a toxemia. The temperature ranged between 103° and 105° for several days and in addition to treatment of the local condition the underlying toxemia was treated in a manner similar to the toxemic stage of burns; mainly by the administration of alkalis and the judicious use of stimulants. Daily constant examinations disclosed no other pathology with the exception of a mild

pyuria which cleared up with improvement in the condition of the skin.

Dr. Marcus concluded his report with presentation of a case of "Influenzal Meningitis" in an infant 16 months of age, and with an investigation of the literature relative to this condition. Adams reported the first case in 1907, a case that occurred in a boy aged 5 years, and ran a course of 10 days, with resulting death. This case occurred in a family in which other members were convalescing from an influenzal infection, and the patient had a mild attack about one week prior to the onset of his fatal illness. The specific organism was isolated from the spinal fluid.

Koplik's case was published by Heiman in the same year, these 2 cases being the first reported by American physicians.

One of the first cases reported was by Hogerstedt, in 1895, in a male child (Pfeiffer described the bacillus in 1892); no lumbar puncture was performed but at necropsy the Pfeiffer bacillus was cultured from the meningeal exudate. The next case reported in a foreign country was by Pfuhl, in 1897, after which occasional reports appeared by various authors.

Case Presentation. Baby R. S., 16 months of age, subnourished. On November 24, 1927, the mother stated that the baby was quite "restless and had some fever". Home remedies and accompanying treatment were resorted to and 2 days later, when the baby showed no improvement, Dr. Bernard Crane was called. A history of mild gastro-enteritis seemed to precede onset of the illness; rectal temperature was 101° F; slight rigidity of the neck was present; a marked Kernig's sign; sluggish reaction of the pupils to light. At this time a tentative diagnosis was made of intestinal influenza with an accompanying meningism. The following day the symptoms and signs became exaggerated and the patient's general condition was markedly worse, at which time I was called in consultation.

Family history. Mother and father living and well. One sister, 6 years of age, living and well. Mother had no miscarriages and had 2 pregnancies.

Past history. Baby was full term, delivered with the aid of low forceps, labor consumed 18 hours, born in good condition and weighing 7 lb.; has had no previous illness but has always been underweight and difficult to feed. The baby typified "the china doll type", being delicate in appearance.

Development history. Baby held up its head at 13 months; at 7 months had 2 lower central incisors.

Feeding history. Nine months breast fed and up to the present time prior to illness the baby's diet consisted of 1 pint of milk, cereals with milk, green vegetables, potatoes, unpolished rice, egg, scraped meat, various crackers, orange juice. Due to lack of appetite, cod-liver oil had been discontinued, but was administered routinely from 1 month up to 6 months of age.

Present illness. The patient appeared drowsy and mother stated baby felt hot. The following day, November 24, baby slept, ate and vomited 2 or 3 times. No convulsions.

Physical examination. Baby lying in semistuporous condition, quiet with eyes closed and breathing somewhat irregularly, poorly developed and subnourished, "best weight about 18 lb." The head was moderately rachitic, anterior fontanel open and somewhat tense, posterior fontanel closed. Eyes were equal and reacted sluggishly to light; slight internal strabismus of both eyes;

ears showed faint area of reddening at the circumference of both tympani, no bulging; rest of the membrane was pearl gray in color. Nose, mouth and throat revealed no suggestive signs. The neck was moderately rigid, and when the head was flexed on the chest, child would cry out in pain. No glandular enlargements. Chest showed a mild rickety rosary, with slight flaring of the ribs. Lungs and heart revealed nothing of importance. Abdomen on a level with the thorax, and somewhat tender throughout, no mass felt. The lower border of the liver was palpable 1 in. below the costal margin; spleen not palpable. Reflexes: Kernig and Brudzinski, positive; the superficial reflexes were apparently normal. Skin: no eruption seen, marked loss in subcutaneous turgor and fat. Temperature 102°, pulse 100, respirations 30. Patient was ordered to the hospital but was not taken until the following day. A provisional diagnosis was made of meningitis of bacterial origin or meningism secondary to influenza or other parenteral infection which at this time was not obvious. Spinal puncture was requested at this time but the parents decided that they would wait until the following day when the baby would be sent to the hospital.

Upon admission to the Atlantic City Hospital, on the following day, symptoms and signs had not altered. Spinal puncture revealed moderately turbid fluid under marked pressure. Examination disclosed a cell count of 2419 per cubic millimeter, 50 mg. per cent sugar, globulin not increased, colloidal gold growth .0000121000. The spinal fluid smear showed numerous pus cells and gram-negative bacilli. Spinal culture disclosed gram-negative nonmotile hemophilic pleomorphic bacillus of the influenza group. Spinal Wassermann was negative. Blood examination: Leukocytes 37,500, with 92% polynuclears, small lymphocytes 6, large lymphocytes 2%. No abnormal cells found or changes seen in blood cells. Urine showed numerous pus cells.

Subsequent course. Frequent spinal punctures were made by Dr. Crane, yielding approximately 10 c.c. of cloudy fluid which was progressively becoming more turbid. On December 5, the patient was more rigid assuming a marked opisthotonos, and her general condition was markedly worse. As spinal puncture at this time yielded no fluid, a puncture into the cisterna magna was performed, yielding about 15 c.c. fluid under marked pressure and markedly turbid. Following this relief of pressure the patient demonstrated considerable improvement but 12 hours later condition gradually became worse, the patient dying 2 days later at 2 a. m., 14 days following onset. No autopsy was permitted. Repeated examination of the spinal fluids made by Dr. Robert A. Kilduffe, consistently showed presence of the Pfeiffer bacillus, the spinal fluid smear constantly showing numerous pus cells and gram-negative bacilli.

This case probably embodies a primary influenza meningitis without any apparent or obvious source of infection. There was no history of contact, no illness in the family. The patient at no time exhibited the slightest trace of infection of the upper air passages. There might, however, be a possibility that this meningitis was secondary to an intestinal influenza of which I am doubtful.

It is the consensus of opinion in the literature reviewed in the preceding pages that influenza meningitis is most frequently secondary to an infection of the upper air passages.

Summary

- (1) A case of influenzal meningitis in a female aged 16 months is herewith presented.
- (2) There was no obvious or apparent nidus of infection, as demonstrated during the course of the infection, which could have been the origin.
- (3) The meningeal irritation was greatly relieved by puncture and drainage of the cisterna magna.
- (4) Successive spinal fluid smears and cultures revealed the consistent presence of gram-negative bacilli of the pleomorphic and hemophilic type of the influenza group.
- (5) The leukocytosis found in this case is in marked contrast to the usual leukopenia found in cases of respiratory influenza.

Dr. Robert A. Kilduffe, Director of the Laboratories, detailed his report for 1927, which covers a period of 12 calendar months from January 1 to December 31, 1927.

During this period the laboratory has suffered a great loss by the untimely death of one of its most understanding and ardent supporters, Dr. Richard Bew, whose passing has left a void it will be impossible ever entirely to fill. Others may have his interest but few indeed will ever be gifted with his understanding of the laboratory's problems. He has been and will be greatly and sincerely missed.

During the past year the laboratory personnel has remained practically unchanged and, at present, consists of the Director, his secretary, 6 full-time technicians, a laboratory orderly who also acts as messenger and general utility man, and the Resident Physician on laboratory service. That all have been fully occupied by the demands of the laboratory work will be amply demonstrated by the statistical report which follows.

The total number of laboratory examinations during 1927 was 38,848, an increase of 5560 over the number for 1926, and represents a daily average of 113, excluding Sundays, or a daily increase during 1927 of 18 reports per day. If the efficiency of a laboratory were to be judged solely by the number of examinations reported, the laboratory may well rest without apology upon the statistical report. This, however, represents but one angle of the activities of a laboratory, or indeed, of any division of a hospital and, of itself and alone, cannot be relied upon to indicate the true activities of the department.

The number and variety of examinations listed in the statistical report serve to indicate the degree to which the laboratory resources have been utilized by the clinician but do not indicate the very extensive and gratifying extent of the liaison which has existed between the laboratory and the clinical departments accomplished by discussions, conferences and consultations for this purpose.

For accomplishment of this function not only careful work and accessible records, but active clinical cooperation are essential, and that such an effort has been made the list of 28 publications issued from the laboratory during 1927, suffices to demonstrate. This is an increase of 11 over the publications during 1926, 6 papers of the present series representing investigations carried on in the laboratory.

During the past year the laboratory has served the needs of several charitable institutions, such as the Atlantic County Tuberculosis Hospital, the Betty Bacharach Home, the Children's Seashore Home; it has also served the Health Department by examinations.

Dr. Kilduffe concluded his report of activities with recommendations that embodied an increase in laboratory floor space, as at present the large volume of work performed necessitates such an increase; that added space be obtained so that a segregation of the bacteriologic work may be brought about; added equipment for the convenient using of laboratory animals for experimental purposes; the founding of a pathologic museum; and equipment necessary for microphotography. In conclusion the director voiced his appreciation of the coöperation extended during 1927 and urged its continuance during the year to come.

BERGEN COUNTY

The second Tuesday evening in February brought forth the most disagreeable, gusty, rainy night of the winter so far. In consequence, the monthly meeting suffered proportionately. However, Dr. F. C. McCormack presided over a group of about 20 members when all stragglers had arrived.

The business meeting was dispensed with for lack of a quorum and the courtesy of the floor was extended to the Scientific Committee.

Our guest of the evening was Dr. E. D. Friedman, Professor of Neurology, University and Bellevue Hospital Medical College. Dr. Gilady, Chairman of the Program Committee, introduced Dr. Friedman as one of his old teachers in medical school and a man distinguished for his clinical and research experience.

Dr. Friedman's subject was "Experiences with Encephalography via the Lumbar Route".

The inconvenience of trephining in order to inject the ventricles with air, led Dr. Friedman to try injection of air by the lumbar route. He feels that this step offers a very advantageous method of determining certain pathologic facts. The air injected in the spinal canal of the lumbar region will go upward and eventually pass into the ventricles where it may be demonstrated by x-rays. If there is any block in the spinal canal, ascent of the air is halted at that level. Spinal cord tumors, or tumors present in the medulla, cerebellum, and even higher up, may be located by presence or absence of the outline of the ventricles.

Dr. Friedman has a series of over 100 cases in which this procedure has been employed. Of these, he reviewed 19 cases in detail. Six of these were proven to be brain tumors, and the remaining number were epileptics. The encephalography diagnosis was substantiated in these cases by operation or autopsy findings.

After a short discussion commending Dr. Friedman on his pioneer research work the meeting adjourned.

CAMDEN COUNTY

R. E. Schall, M.D., Reporter

The regular monthly meeting of the Camden County Medical Society, held February 14, was called to order by President T. W. Madden. Minutes of the previous meeting were read and approved.

The scientific program was devoted to a series of papers upon "Arthritis". Dr. B. F. Buzby opened the symposium with a paper dealing with the subject in general; Dr. T. M. Kain, presented the "medical aspects"; and Dr. D. F. Bentley dealt with the "gonorrhoeal form of arthritis". (All

these papers will appear in full in a later edition of the Journal).

These papers were ably discussed by Drs. Lipincott, Lee, Shaeffer, Deibert and Lewis.

ESSEX COUNTY

John J. Connolly, M. D., Reporter.

The Essex County Medical Society held its regular meeting Tuesday evening, January 24, at the Academy of Medicine, with Dr. Max Danzis occupying the chair. The reading of minutes of the previous meeting was dispensed with, as well as the regular order of business, as the general public was invited to attend.

The Council recommended to the society that Dr. Floy McEwen, in recognition of the great work he did in furthering the cause of certified milk, be made an honorary member of the society. This was put in the form of a motion and duly passed.

Dr. Morris Fishbein, Editor of the Journal of the American Medical Association, was the speaker of the evening. His topic was "Medical Fads and Quackeries".

Dr. Fishbein's address, in which he reviewed quackery from the time of Paracelsus up to the present, was extremely interesting and witty.

Society of Physicians of Montclair.

On Thursday evening, December 19, Dr. Howard Clute, an associate of the Lahey Clinic in Boston, Mass., addressed the physicians of Montclair and vicinity on the subject of "Goitre". Drs. John F. Haggerty, Martin J. Synnott and William H. Areson discussed the paper.

Society of Surgeons

The Society of Surgeons of New Jersey met at the Hotel Robert Treat, Friday evening, December 23. Dinner preceded the meeting. At the scientific session Dr. George Blackburne spoke on "Gastric and Duodenal Ulcer", with Dr. G. K. Dickinson of Jersey City discussing the paper.

Dr. F. P. Haussling read a paper on "Bone Tumors" which was discussed by Drs. Sexsmith and Hawkes.

The third paper of the evening was delivered by Dr. John F. Haggerty on the subject of "Goitre" and was discussed by Drs. Miner and Cosgrove, of Jersey City.

GLOUCESTER COUNTY

James Hunter Jr., M. D., Reporter Protem.

A regular meeting of the Gloucester County Medical Society was held at the Woodbury Country Club, February 16, with President Buzby in the chair.

The meeting was given over to "Tuberculosis". A two-reel film entitled "The Doctor Decides", loaned by the New Jersey Tuberculosis League, was shown. Dr. S. B. English, of Glen Gardiner, read an exhaustive paper upon the "Early Recognition, Diagnosis and Treatment of Tuberculosis".

Dr. Alexander Macalister, of the Camden Tuberculosis Society, followed with a short paper suggesting coöperative work along preventive lines, jointly by the County, National and State Societies.

Dr. Hunter called attention of the society to an article entitled "The Tuberculosis Game", by

Dr. Maurice Fishberg, of New York, published in the February number of "American Mercury", quoting at length from the article which contended that it was "time for the profession to re-examine its knowledge upon the question of tuberculosis".

President Buzby made an eloquent appeal for better attendance at meetings, stating that he was willing to "go his limit" in securing the best speakers obtainable, but he thought it was also up to the members to show their appreciation by increased attendance and punctuality.

Dr. Pedrick, of Glassboro, was elected to membership. Dr. Emma Richard was present as a delegate from Camden County Society.

The Secretary, Dr. Hollinshed, then introduced the subject of "The standing orders for the nurses of the Metropolitan Insurance Company", as issued by the Company to their nurses, and for which the Company would like the endorsement of the society.

After a full discussion, the society decided the matter in the negative.

Following adjournment, a nice luncheon was served by the Club's Caterer, and the Society was honored by a short visit from Mrs. Taneyhill, assistant to Dr. Reik, Mrs. Underwood and Mrs. Hunter, who arrived in good time to answer some pointed questions of President Buzby concerning the purposes of the Women's Auxiliary of the County Society.

On motion, the Secretary was requested to convey to Mrs. Glendon the sympathy of the Gloucester County Society in her irreparable loss in the death of Dr. Glendon, of the Cumberland County Society.

HUDSON COUNTY

M. I. Marshak, M. D., Reporter.

The Hudson County Medical Society met at the Carteret Club, Jersey City, on February 7, with Dr. S. R. Woodruff presiding.

Dr. Jerome M. Lynch of New York City, spoke on "Surgery Versus Radium in the Treatment of Cancer of the Rectum".

"Cancer is always a local condition to begin with and is due to a crowding of cells produced by a vitamin imbalance." The last section of this statement is a theory accepted by Dr. Lynch and propounded by Burrows of St. Louis. Dr. Lynch read extracts from an article by Burrows and showed by diagrammatic slides how cell crowding produced cancer. He also showed slides to illustrate that one can never tell or predict the size of the tumor or the extent of the metastasis by the visible mass. Cancer is more frequent in the rectum than in any other part of the alimentary tract except the mouth. Death in 60% of cases is due to perforation, rupture or obstruction. He stated that radiation should never be used without previous colostomy; that it should never be used in inoperable tumor of the anus, as stenosis is sure to follow and marked proctitis with unendurable pain is usually produced. Mild dosage of x-rays gives relief at times, while larger doses will produce cystitis. Operation is the only method of treatment which will give results lasting over a period of 5 years and should preferably be in one-stage as it is essential that the tumor be profoundly removed. There is no standard possible; in each case the kind of operation depends on the conditions found after opening the abdomen.

Drs. Dickinson, Mathesheimer, Miner, Friele and Nevins took part in the discussion.

Dr. Woodruff announced that Dr. L. R. Williams, of the National Tuberculosis Association, would be the speaker at the March meeting. His topic will be the "Medical Aspects of the Campaign for the Early Diagnosis of Tuberculosis". He also said that attempts are being made to have Dr. Lawrason Brown of Saranac Lake present.

Dr. Sweeney brought in a report for the "Medical Abuse" committee which found that this abuse was especially prevalent in Jersey City and recommended that they be given the authority to interview those in charge of the various hospitals, with a view to having conditions improved. After discussion by Drs. Reitnauer, Little, Cobham, Maris, Swiney and Sweeney, a motion was passed that the report be received and the committee's recommendation be adopted.

Dr. Forman, of Jersey City, moved that a committee be appointed to look into the matter of a campaign for the eradication of diphtheria. Dr. Rundlette seconded the motion which, after a talk from Dr. Neimeyer describing the campaign in Union City, was adopted.

Osler Clinical Society

M. I. Marshak, M. D., Secretary.

The Osler Clinical Society met at the Union League Club, Jersey City, on February 15, with Dr. D. Miner presiding.

Dr. Perkel reported a case of acute nephritis complicated with pulmonary edema cleared up after the intravenous injection of novatropin, other medication having been used with no apparent effect. Novatropin, according to Dr. Jaffin, who recommended its use, is a homatropin hydrobromide and acts as an antispasmodic without the toxic effects of atropin.

Dr. Jaffin read a paper on "Diagnosis of Chronic Gall-Bladder Disease". He stressed especially those cases in which the history is not definite, where the difference between gall-bladder disease and other upper abdominal conditions, such as chronic dyspepsias, gastric or duodenal ulcers, periduodenitis and some chronic heart conditions, is difficult to make out. He advocated use of cholecystography with the aid of the tetrahalogen dye (the so-called Graham test.) He reported on a series of 50 cases and showed slides and x-ray plates to illustrate his remarks. He believes that the clinical diagnosis of gall-bladder disease is incomplete without the use of cholecystography; that gall-bladder disease is improbable in the presence of negative x-ray findings; and, that many laparotomies can be prevented by use of the methods that he described.

Drs. Miner, Von Deesten, Perlberg, Friele, Seigler, Jaffin and H. Kranklin took part in the discussion.

The executive committee reported that they had obtained Dr. Howard Lillienthal's consent to talk on "Suppurative Disease of the Lungs Treated by Surgery" at the open meeting of the Osler Clinical Society to be held at the Carteret Club on March 21, 1928.

MERCER COUNTY

A. Dunbar Hutchinson, M. D., Secretary.

The Mercer County Medical Society met in the Carteret Club, February 8, 1928. Dr. George Blackburne, of Newark, was introduced by President Sista, and deeply interested his audience with instructive discourse on the subject of "Gastric and Duodenal Ulcer".

Many excellent slides were shown and interestingly described.

A large number of the members present took part in the discussion which followed, Dr. Blackburne closing.

Certain suggested standing orders as applied to the Nursing Service of one of the Insurance Companies, were thoroughly discussed before being endorsed by the society.

Amendments to the By-Laws were introduced by Drs. Sommer and North, as follows: In the application for membership, inserting the words, "being a Citizen of the United States"—after the word "undersigned"—and replacing the word "two" in place of the word "one"—preceding the word, "year".

Article 9, Section 1, paragraph 2, to read as follows: "Any member in arrears on January 15, following the due date, shall no longer be considered a member", etc., no change being in the remainder of the paragraph.

About 40 of the members remained for luncheon following adjournment.

MIDDLESEX COUNTY

Medical Section of Rutgers Club

John H. Rowland, M. D., Secretary

The monthly meeting of the Rutgers Medical Club was held at the home of Dr. Laurence Runyon, 14 Union Street, New Brunswick, N. J., on Thursday evening, January 12, 1928.

About 40 friends, guests and members were present. The speaker of the evening, Dr. John Kolmer, of Philadelphia, was introduced promptly at 9:00 p. m. and presented a very interesting talk on "Chemotherapy of Bacterial Infections."

Following this there was brief discussion and all enjoyed the subject very much.

The gathering was then served with most pleasing refreshments.

Medical Section of Rutgers Club.

John H. Rowland, M. D., Secretary.

The regular monthly meeting of the Medical Section of the Rutgers Club was held on Friday evening, February 10, 1928, at the home of Dr. John F. McGovern, 24 Livingston Avenue, New Brunswick, N. J.

The regular business of the Club was carried on at a special business meeting held on Friday evening, January 27, 1928, at the office of Dr. Howley, 419 George Street, New Brunswick, N. J.

There being no business to transact, the speaker of the evening was introduced promptly at 9 p. m. There were present about 40 members, guests and friends who listened to Dr. Orlando Petty, of Philadelphia, on the subject of "Diabetes".

Dr. Petty spoke very interestingly and in story-like manner on many of the phases of diabetes; but particularly of the diagnosis in beginning cases, the importance of blood chemistry as a means of differential diagnosis, and of the necessity of working in consultation with the surgeon and the specialists.

The subject was discussed freely by the members and all present felt the evening was spent to marked advantage. The meeting adjourned spontaneously.

After the scientific program all enjoyed refreshments and a social hour.

MONMOUTH COUNTY

F. J. Altschul, M. D., Reporter.

The January meeting of the Monmouth County Medical Society was held at the Berkeley-Carteret Hotel, Asbury Park, January 25, 1928. About 45 members were present, and Dr. J. C. Clayton, of Freehold, presided.

Four new members were elected: Drs. Alfred Podell, of Red Bank; Daniel Manahan, of Monmouth Beach; Daniel Traverro of Belmar, and J. Wiener, of Asbury Park.

After a short business session, Dr. Cotton, of the New Jersey State Hospital, Trenton, was introduced as the speaker of the evening. Dr. Cotton discussed in detail the work being done at Trenton in the treatment of mental diseases. He stated that the importance of focal infections had been greatly underestimated, and the results obtained at Trenton proved to him that in the so-called "functional" group of nervous disorder (e. g., dementia-praecox and manic depressive psychosis) a great number of early cases could be greatly improved and in a few instances, absolutely cured by removing all foci of infection. He stated that the routine examination of psychiatric patients should include a thorough search for infectious foci, especially in the teeth, tonsils, sinuses, and gastro-intestinal tract. Dr. Cotton said that prior to 1920 considerable surgery had been resorted to, at the Trenton Hospital, in an attempt to eradicate the colonic foci of infection, but that in the last few years he had employed less surgery and depended on extended courses of colonic irrigations in cases of stasis.

Surgery was confined to: (1) cases where the constipation was due to anatomical anomalies (peritoneal bands, congenital abnormalities, etc.); and (2) cases where the constipation had produced extensive erosions and diverticulae of the colon.

Dr. Cotton described European methods in treating mental diseases, and spoke about his recent trip abroad. He stated that sinus infection, in particular, was considered an important factor in the causation of mental disorders. Dr. Cotton illustrated his lecture with many lantern slides.

Drs. J. F. Ackerman, O. K. Parry, H. B. Darr, all of Asbury Park, discussed the paper.

The society was very much impressed by Dr. Cotton's gracious personality and sincerity, and a rising vote of thanks was given him for his splendid lecture.

The meeting then adjourned.

MORRIS COUNTY

Morris County Medical Society

Marcus A. Curry, M. D., Reporter.

A special meeting of the Morris County Medical Society was held on the evening of Tuesday, February 14, 1928, at the Parish House of the Church of the Redeemer in Morristown. Weather conditions were so unfavorable as to offer every discouragement to the members planning to come from any distance and even some of the more venturesome of these who did attend expressed themselves as more than once being almost persuaded to head around for home.

President Haven presided over an attendance of about 23 members, but with Dr. Reik, Executive Secretary, and Dr. Morrison, Recording Secretary of the State Society present, what the meeting lacked numerically was largely compensated for in the interest manifested and the

opportunity to learn at first hand a great deal of the work that is being carried on by the State Society and how it is carried on.

Before taking up the call of the special meeting, President Haven announced the following personnel of committees authorized at the last meeting to be appointed: Publicity Committee—Drs. Emery, Morristown, and Costello, Dover. Auxiliary—Drs. Summers, Boonton; Klauss of, Chatham; Dr. Peck, Boonton; Flagge, of Rockaway; and Dr. Bird, Netecong. Library Committee, Drs. Larson and McMahon of Morristown.

The special meeting was called to have the society act upon matters which the Executive Committee felt should have the consideration of the society as a whole, as follows: (1) Antidiphtheria Campaign. (2) Campaign for Periodic Health Examination. (3) The question of Expert Testimony. (4) Annual Registration. (5) The Women's Auxiliary.

Dr. Reik being invited to address the meeting gave a graphic account of his stewardship as editor of the State Journal and as Executive Secretary of the Society; attention was called to the progress being made by the Journal, with the expression of the hope that all are reading it, as it is the medium between the officers of the State Society and the members; mentioning that they are called upon to answer a considerable number of inquiries on subjects that previously have appeared in the Journal; describing what they are now running in the Journal and stating that he thought some of the scientific reports from the County Societies are quite equal to the columns allotted to original articles; that they try to keep the members posted on what is going on not only in this state but in other states; that they report the activities of the Tristate Conferences, New York, Pennsylvania and New Jersey, which are very interesting reading, and the impression on the country is such that the practice has been adopted in New England and some of the Western States are considering doing the same thing, and referring to Dr. Morrison having been invited by the American Medical Society to address the Convention of Secretaries of the various State Societies; they also report the activities of the Welfare Committee, whereas before it was the custom to report to the annual meeting and the members did not know what the Welfare Committee was doing and only had a condensed report at the end of the year; also reported in the Journal is the progress made in the Antidiphtheria Campaign and the friends they have made; that for four years now they have been trying to interest the physicians of the State on the one side and the public on the other, in Periodic Health Examinations; that there has been an effort this year to carry on in a broader way, by presenting the subject before various clubs such as Rotary, Kiwanis, Lions, Y. M. C. A. and other groups of men; that last year the House of Delegates authorized the appointment of an assistant to carry this on to the women's clubs, for which they had been fortunate in securing Mrs. Taneyhill, a woman who has been well trained in medical matters and also a trained public speaker of wide experience, and describing the intensive work she has been carrying on through the Women's Auxiliaries; also referring to the distribution of the "Primer" that has been made and the radio broadcasting of preventive medicine talks and how it is carried on; that these papers are sent to the press throughout the State to be published coincidentally with the broadcasting and suggesting that the local society get in touch with their papers

to see if the articles are being published or if the papers are willing to publish them; also referring to various bills in the Legislature, stating that 11 bills have been introduced up to yesterday that have some medical bearing but most of them of not much importance to us; however, calling particular attention to the Naturopathy bill, Assembly 119, and Osteopathy bill, Assembly 193, for opposition; with reference to Senate 34. Dr. Reik was not quite sure of the reason for its introduction but it is for the reorganization of certain State departments and there are some vicious features in the bill, one being that it would abolish the Board of Medical Examiners and put the licensing of physicians under a new bureau appointed by the Governor and there is no provision for anyone on it with any medical knowledge; these are the 3 bills at the present time he would like to see opposed.

On the subject of the Antidiphtheria Campaign, Dr. Reik said: It originated with the State Medical Society but this apparently is not understood by a good many members; that to abolish diphtheria it was thought wise to get the laity interested in it; describing the large meeting that grew out of this, at which were representatives of all public organizations and which meeting they were fortunate in getting the Governor to sponsor and to give all the boost he could; that it was found when Health Officers started to do something there was opposition from certain physicians so he asked each County Society to adopt a resolution binding the members to give it support; that it is not expected they can put on a whirlwind campaign and clean up the State in a year; that as far as they have gone is to get out a certain amount of literature.

On the first item in the call the "Antidiphtheria Campaign" the following resolution, offered by Dr. McMahon, was unanimously adopted:

"BE IT RESOLVED: That the Morris County Component Medical Society go on record as favoring the "Statewide Antidiphtheria Campaign" inaugurated by the State Medical Society of New Jersey; that the matter be referred to the Publicity Committee; and that the members of this society individually assist the Committee in the furtherance of this campaign in every way possible."

Dr. Lathrope spoke on the Tuberculosis Campaign which the State Tuberculosis Association has under way and that the Publicity Committee is already in touch with them in regard to that, and after Dr. Lathrope's talk action was taken that the same support be given through the Publicity Committee and individual members to the Antituberculosis Campaign that we give to the Antidiphtheria Campaign.

Dr. Reik spoke on the Campaign for Periodic Health Examinations as he sees it from the State Society point of view; mentioning more encouragement from the moving picture presentations, the opportunities afforded to address lay organizations and expressing the belief that the lay organizations are ahead of the profession; that the public is showing interest in periodic examinations and the profession is showing increased interest but not at the rate of public progress, with the result that a large part of the work is going to institutions and groups more or less under lay control, and expressing the wish that the individual members take more interest as it is work that belongs to the medical profession; in fact, medical men make the examinations for the commercial organizations and could get more out of it by doing it for themselves; and ex-

plaining why this work should be taken up more enthusiastically and its advantages to the profession; that it should not be done as an emergency but by appointment and taking time to do it right; that Monmouth County has adopted a minimum fee of \$10 for a health examination but most counties haven't got so far as to adopt a fee; advising not to go into it unless you do it right; if done well, it is good business, but if not it is bad business; that the profession had better take an interest in it as there is a demand for it.

Dr. Lathrope spoke on his experience in making these examinations and others speaking on the subject were Dr. Thomas, Dr. F. Grendon Reed, and Dr. Abell, who stated that she had been interested in Periodic Health Examination as head of the Tuberculosis League and that from the education and pictures shown, the laity know pretty well what to expect in the way of a health examination; that it seemed to her that it is up to the medical profession to take an interest and fix a proper fee and expressing the thought that \$10 would be a proper fee. The prosecution of this work is to be urged much more strongly.

The question of Expert Testimony was discussed from many interesting and important angles by Dr. Lathrope, Chairman of the Committee on Expert Testimony of the State Society, who stated that the Bar Association of the State also has a committee on Expert Testimony which has submitted to the Bar Association a plan which will go to their Legislative Committee and which the committee from the Medical Society is going to have opportunity to act upon; also explaining just what is meant here by "expert testimony" as distinguished from direct testimony, the former being when we are called upon to express an opinion and not the facts of an ordinary accident; outlining the plan considered and citing its favorable reception by jurists to whom it has been presented; also explaining the system in operation in England. Dr. Curry also spoke on the subject of expert testimony from the standpoint of mental cases; expressing the belief that until we "debunk" it and decide what is expert testimony and until we get some qualifying standard as to what the qualifications of an expert are, we aren't going to get far, because practically anyone can now qualify for anything; that for some years the American Psychiatric Association has been working with the American Legal Association in trying to establish something definite from the standpoint of expert testimony; citing the practice in Massachusetts where the court appoints 3 qualified men to examine a man setting up the plea of insanity as a defense, explaining the working of this system and how the opinion is accepted and citing where one defendant was convicted and paid the penalty, having been found sane by the board of experts, and another acquitted after having been found insane by the experts, and sent to the institution for criminal insane.

The subject of Expert Testimony was discussed at length and will be pursued further in an effort to accomplish something definite.

Annual Registration was discussed at length; Recording Secretary Morrison contributing liberally of his intimate knowledge and setting forth the advantages and the assistance it would be in driving out illegal practitioners; and explaining that New York and Pennsylvania have annual registration with the result that the "quacks"

cross the Hudson from New York and the Delaware from Pennsylvania.

After rather animated discussion and in view of the limited number of members present action was taken to "table" the question until the March meeting.

The Woman's Auxiliary was explained by Dr. Reik and this subject was discussed with much zest from various standpoints and the result was the carrying of a motion offered by Dr. Curry, seconded by Dr. Glazebrook, favoring the forming of a Woman's Auxiliary.

Action also was taken expressing the appreciation of the society to Dr. Reik and Dr. Morrison for their presence at the meeting and for so ably discussing the various questions in such an informative manner; also thanks were expressed to the Church of the Redeemer for the use of the hall.

Dr. F. Grendon Reed called attention to the introduction by United States Senator Robinson, of Indiana, of an amendment to the Tax Reduction Law, whereby physicians may deduct expenses incident to attending medical meetings; and action was taken endorsing this amendment and requesting our secretary to write to the New Jersey Senators to that effect.

President Haven announced a very interesting program for the March meeting, being a symposium by members of the Society: (1) Problems of Management in Malnutritional Diseases of Early Childhood—by Dr. Krauss; (2) Tuberculosis in Infancy and Childhood, special reference in type between childhood and adult life—by Dr. Bartlett; (3) Protein Susceptibility in Infancy and Childhood—Dr. Sherman; (4) After Effects of Infectious Diseases on Child Life—Dr. McElroy.

PASSAIC COUNTY

John H. Carlisle, M. D., Secretary.

A regular meeting of the Passaic County Medical Society was held February 9, 1928, at the Paterson Health Center, Dr. Tuers presiding. There were 49 members present. The minutes of the last meeting were read and approved.

A favorable report from the Board of Censors was received on the application of Drs. H. H. Hollingsworth, J. E. Phelps and A. P. Powelson, who were unanimously elected to membership. Dr. R. J. MacDonald was elected by transfer from the Morris County Medical Society. Applications from Drs. Polizzotti and Linares were received and referred to the Board of Censors. A letter was received from Dr. Scribner resigning as Permanent Delegate. This was accepted with regret. Resolutions were read on the death of Dr. Machlin, and the death of Dr. Vigna was announced.

Dr. B. S. Banninger, of Memorial Hospital, New York City, gave an interesting talk on "Cancer of the Bladder and Prostate, Radium Treatment". Owing to the early spread of prostatic concerns beyond the gland, Dr. Banninger was able to report only a small percentage of cases with what he felt was a distinct prolongation of life. As the expectation of life was only about one year, he advised against operative interference. In some tumors of a radio-sensitive nature, he reported great improvement even when definite evidence of bone metastasis existed. He was more hopeful about cancers of the bladder. At present, the technic at Memorial Hospital consists in opening the bladder, removing most of the growth

by cautery and then burying gold radium seeds in the base of the growth. Drs. T. Dingman, S. Levine, MacDonald and Keefer discussed the paper.

The Committee on the Care of Incurables reported in favor of retaining the units of the Paterson Isolation Hospital which will be vacated by the opening of Valley View Tuberculosis Sanatorium as a "Home For Incurables". It was moved that the society endorse this view and the committee be continued.

The annual registration of physicians was then discussed. As Dr. McBride of the Welfare Committee was present and reported that the State Board of Medical Examiners would make no recommendation to the Legislature this year, no action was taken.

The following resolution was then passed in favor of the State-Wide Antidiphtheria Campaign: "In view of the fact that the 'State-Wide Antidiphtheria Campaign', inaugurated by conference of medical organization April 10, 1927, and sponsored by a large public convention under the auspices of Governor A. Harry Moore, has been approved by the Medical Society of New Jersey; and whereas our state society officers are participating in arrangements for developing the program of that campaign; Therefore, be it resolved, that this county society endorse the movement and pledge its support to the campaign committee and the state and local health authorities in the effort to abolish diphtheria".

A discussion of the campaign for the Early Diagnosis of Tuberculosis followed and it was decided to show the film, "The Doctor Decides", at the next meeting.

Meeting adjourned at 11:20 p. m.

SALEM COUNTY

William H. James, M.D., Reporter.

The regular meeting of the Salem County Medical Society was held at the Memorial Hospital, Salem, February 8, at 2 p. m. The meeting was called to order by President R. M. A. Davis. The minutes were read by Secretary David W. Green, and approved by the society.

After the regular business was transacted the society had the pleasure of hearing a paper by Dr. Dunham, of the Camden County Hospital, on "Early Diagnosis of Tuberculosis". The speaker said that tuberculosis, when seen early, is easily treated but when of long standing is most difficult to treat and the prognosis is bad. Early diagnosis is most important and when a patient feels tired, and shows loss of appetite, stubborn cough, spitting of blood, a doctor should be consulted.

There were 21 deaths from tuberculosis in Salem County last year. Low blood pressure has considerable to do with making a diagnosis, other things being equal. Gonorrhoea and other sickness have a tendency to aggravate the disease. X-ray treatment is an important factor in diagnosis. Dr. Dunham showed a film which fully explained the steps in the disease from beginning to end. It was called "The Doctor Decides".

Dr. John J. Gilbride, of Philadelphia, a classmate of Dr. Davis, gave a very interesting talk on the "Surgical Treatment of Tuberculosis in other Parts of the Body Than the Lungs".

There were a number of visiting physicians from other counties, including Drs. Moore, Wyatt Fritts and Shepperd, of Cumberland County.

At the conclusion of the meeting it was de-

ecided to hold the next meeting at the Memorial Hospital, on the second Wednesday in April.

Dinner was served at Johnson Hotel.

SOMERSET COUNTY

Lancelot Ely, M.D., Reporter.

The Somerset County Medical Society held its regular meeting February 9, at the Nurses' Home, Somerset Hospital. Routine business was conducted, and 5 new names added to the membership. The county society is urging upon the Board of Freeholders the erection of a hospital for contagious diseases, this to be erected on the grounds of the Somerset Hospital.

Dr. F. M. Hoffman, of New Brunswick, gave a very interesting and instructive paper on "The Treatment of Lung Abscess by the Bronchoscopic Method". He read several case histories and showed x-ray pictures to demonstrate his talk. Dr. Kline, of New Brunswick, explained in detail several of the radiographs.

The Woman's Auxiliary of the Medical Society held its meeting at the Court House at the same time. Mrs. E. C. Taneyhill gave an informal talk on Periodic Health Examination and the importance of immunization for communicable diseases. She had presented the same subjects to the High School pupils in an assembly on Thursday.

UNION COUNTY

Summit Medical Society

W. J. Lamson, M. D., Secretary.

The regular meeting of the Summit Medical Society was held at Wallace Pines on Tuesday, January 31, 1928, at 8:30 p. m., with President Morris in the chair, and Dr. Krauss entertaining. Those present were: Drs. Bensley, Bowles, Burritt, Ryington, Campbell, Eason, Hallock, Johnston, Keeney, Krauss, Lamson, Larrabee, Meeker, Meigh, Milligan, Moister, Morris, Reiter, Smalley, Tator, Tidaback and Wolfe, and the following guests: Drs. Seward and Eckert of Madison, and Dr. Blanchard of East Orange. Dr. Elwood H. Macpherson of Millburn was unanimously elected a member of the Society.

Dr. Krauss read the paper of the evening on "Acid Milk in Infant Feeding".

Several acids may be used in the preparation of acid milk; hydrochloric, which tends to irritate the kidneys, or the organic acids, such as lactic, acetic or citric. Each has its advocates, but the most commonly used is lactic acid, which is of value in many cases of difficult feeding, and has many advantageous effects. It produces fine flocculent curds, stimulates the gastric motility as well as the flow of pancreatic juice and bile, and as it is a sterile food it helps to prevent infections of the digestive tract. It is easily prepared in a few minutes, by first mixing the lactic acid with Karo and adding this to milk. The same formula can be used for 6 months or more, requirements of extra nourishment being met by a simple increase in size of feedings.

Indications for its use are a lack of gain in weight on the regular milk formulas, pylorospasm (in which it is thickened with Gruels), diarrhoea due to sugar intolerance, premature infants, marasmus and malnutrition, in which there is a diminished secretion of hydrochloric acid.

Discussion followed.

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PULMONARY HEMORRHAGE; ITS ETIOLOGY, PATHOLOGY AND THERAPY

B. S. POLLAK, M.D., F.A.C.P.

Medical Director, Hudson County Tuberculosis Hospital and Sanatorium; Chief of the Tuberculosis Division, Jersey City; Consultant Phthisiologist, Christ Hospital, Jersey City; St. Mary's Hospital, Hoboken, and Beth Israel Hospital, Newark.

Secaucus, N. J.

Within the domain of the tuberculosis institution there is no condition which taxes the resourcefulness of the medical practitioner more than does the subject of hemorrhage. An individual presumably healthy, without any premonitory signs or symptoms, suddenly has a hemorrhage and, under ordinary circumstances, is adjudged as tuberculous, at least by the lay mind and in many instances by the profession. Fortunately for a goodly number of people, this initial hemorrhage is very often a blessing in disguise, for it causes the individual in the great majority of instances to consult the medical practitioner. Recently we became particularly interested in certain phases of the problem and, although we cannot add much to the present concept regarding hemorrhage, we desire to point out some impressions which we have observed and which, to a degree, have altered our previous interpretation of the pathology leading up to hemorrhage.

In studying the etiology it is important to differentiate hemoptysis from hematemesis. In the former, cough or signs of some pul-

monary or cardiac disease precede the hemorrhage in many instances, while in hematemesis the previous history points to gastric, hepatic or splenic disease. In hemoptysis, the blood is coughed up after a tickling sensation in the throat, but in hematemesis is vomited up, usually after an attack of giddiness. In the former the blood is frothy, bright red in color, alkaline in reaction, and mixed with mucus; in the latter it is clotted, mixed with particles of food, dark colored, and acid. After hemoptysis, the cough persists with signs of lung or cardiac involvement. The sputum, in the majority of instances, is blood tinged for several days. After hematemesis, the patient passes tarry stools, and signs of disease of the abdominal viscera are usually easily detected. Blood stained discharges of nasal, lingual, gingival or laryngeal origin must not be confused with hemoptysis. The sputum is blood streaked, blood tinged, or mixed with blood in many laryngeal, bronchial and pulmonary diseases. For our purpose it will suffice to consider only frank hemoptysis.

Chronic pulmonary phthisis. Hemoptysis occurs in a large number of cases variously estimated at from 40-60%. A study of cases under our personal observation during the period from 1922-1927 shows the following: Cases under treatment 2260; with history of hemorrhage before admission 1055, or 46.7%; with no history of hemorrhage before admission 1205, or 53.3%; hemorrhages after admission in 315 cases, 13.9%.

As already stated, this is usually an early symptom, but in the early stages it is small in amount. The bleeding, as a rule, sets in sud-

denly, the patient notices a warm, salty taste, the mouth fills with blood, and it is usually associated with slight cough. The initial hemorrhage is followed for days or weeks by blood streaked sputum. Observations indicate that hemorrhages usually recur; in our series we found this not to be the case, for but 10.5% of our cases had more than the initial hemorrhage, although in some instances patients had from 10-20 hemorrhages.

Bronchiectasis. Very many cases show repeated small hemorrhages, and large hemorrhages are not at all infrequent.

Abscess of lung. Hemorrhage is a common symptom and we have a mental record of 3 such cases of abscess of lung, followed by large hemorrhages.

Aneurysm of the arch of the aorta. We have observed a series of such cases on the autopsy table, in which rupture of the aneurysmal sac caused fatal hemorrhages.

Pulmonary infarction, pulmonary embolism, and pulmonary apoplexy. Here, too, large hemorrhages occur; this however, is not necessarily a symptom of that condition. In *carcinoma of the lung*, hemorrhages are not at all uncommon.

Wounds of chest. These occasionally give rise to large hemorrhages.

Mitral stenosis. When compensation fails we often observe hemorrhages as a result of pulmonary infarcts.

It is needless to point out that a brisk hemoptysis may be the initial symptom of a lobar pneumonia. Among the less common causes are: Recurring hemoptysis in youth; pertussis; acute aortitis; influenza; gangrene of the lung; syphilis of the lung; hydatid (echinococcus) of the lung; bubonic plague; "hysteria"; typhoid fever; epilepsy; acute miliary tuberculosis, subphrenic abscess; actinomycosis; scurvy; pneumokoniosis; chronic interstitial pneumonia; angioma of the larynx; arteriosclerosis; hemorrhagic laryngitis; enlarged bronchial glands; broncospirochetosis; dermoid cyst of the lung; sarcoma of the lung; diaphragmatic abscess bursting into the lung; emphysema; empyema bursting into the lung; pulmonary endarteritis; impacted foreign body in the air passages; hepatic abscess

bursting into the lung; leukemia; bronchial calculus; mediastinal tumor; lymphadenoma; congenital heart disease; malignant fevers; pernicious anemia; pleurisy (old or interlobar, rupturing into the lung); lingual varix; recurrent hemoptysis of arthritis; chronic bronchitis; parasitic hemoptysis; aortic regurgitation; ulceration of the larynx (cancer, lupus, syphilis); plastic or fibrinous bronchitis; carcinoma of the liver; purpura; fat embolism.

Recently, Davidson of London and Costelani pointed out several cases of hemorrhage due to malaria.

PATHOLOGY

Blood spitting is a frequent symptom of pulmonary disease, particularly pulmonary tuberculosis. It was formerly generally accepted that blood in the sputum meant destruction of a portion of the wall of a pulmonary vessel, the variation in size of hemorrhages depending upon the size of the vessel in which the opening occurred. More careful observation of tuberculous patients, however, shows that blood coming from the lungs does not always indicate the same underlying condition.

Ulceration of the walls of vessels of some considerable size and rupture of aneurysmal dilatations in cavities occur now and then and cause severe or even fatal hemorrhages. Injury to the walls of tiny capillaries is also a frequent cause of bleeding, but the great majority of pulmonary hemorrhages which occur, evidently from their very nature, are not due to either of these causes. They usually occur and recur under certain conditions, the most common of which are changes in weather, the presence of acute respiratory infections, and during the menstrual cycle. They are usually small in amount, consisting of only one or two mouthfuls, but sometimes they are more copious. They frequently persist over several days and are apt to recur when the same or similar conditions again arise. Many of them occur *in the early morning hours*.

A tendency for tuberculous patients to spit blood during the menstrual period has long been recognized. It has been spoken of as a vicarious menstruation. This, we now know, to be an incorrect explanation. This blood

spitting is a part of the general increase in severity of symptoms which occurs at this time, and is undoubtedly due to increased pathologic activity.

Observations made by different observers, the staff of the Phipps Institute and, more recently, Walsh and Montgomery, have called attention to an apparent relationship between certain hemorrhages and the presence of pneumococci and other organisms causing acute respiratory infection. This is too well established now to be questioned. Is it not possible, however, that it might be due to toxic action? "The theory of toxic action seems to us to be the one which offers the best explanation." Such types of hemorrhage rarely occur except where the disease is active. It is not at all improbable that the hemorrhage is part of a collateral inflammatory exudation.

Browning made a study of symptoms, including hemorrhage in its relationship to changes in weather, at the Pottenger Sanatorium, and concluded that there was a definite relationship between their occurrence and barometric changes. Hemorrhages of all kinds are affected by weather conditions. Sudden marked changes from wet to dry, or from dry to wet, fog, sudden hot or cold spells, are accompanied by an increase in incidence of blood spitting, which can be readily observed in institutions where a tuberculous population of 100 or more exists.

Recent advances in biophysics, and studies on the physiology of the circulatory system, suggest a rational explanation for some of the types of bleeding here discussed. Krogh has discussed the effect of capillary poisons which cause such dilation of the vessel walls as to permit of ready passage of the constituents of the blood into the tissues. Among substances classed as capillary poisons he mentions certain salts of gold and arsenic, histamin and sepsin.

Doubtless there are many substances having such action. Clinical evidence shows that many acute respiratory infections are accompanied by blood spitting. The type of acute respiratory infections which have been common since the pandemic of influenza in 1918

have not only been the cause of blood spitting in many frankly tuberculous patients, but in some in whom we could find no evidence of active tuberculous disease. Either the poisons from the tubercle bacilli or the tuberculous process, or that from the germs causing the acute infection, could probably act as direct capillary poisons, or there could be an increased permeability of the vessel walls as a result of increased activity of the local cells.

It is more difficult to explain the manner in which the blood spitting which accompanies changes in weather is produced. This inability to explain on our part is doubtless partly due to our ignorance of the effects upon the body caused by changes in weather and partly to a failure to appreciate the degree of physiologic adaptation which is required on the part of the body to preserve equilibrium during such changes, and especially to a failure to appreciate the handicap to adaptation which is experienced by those cells which are the seat of disease. Think of the change that must be effected to cool the air from 120°, 200° and 300°, as is found in heated ovens, to 98.6°, the normal temperature of the body; or to warm it from zero or a -20° or -40° to that of the normal 98.6° of the body; or of saturating an air with moisture when its relative humidity is reduced to a minimum; or of the adjustment of the body that is necessary for it to function normally in both bright sunshine and in the presence of cloud. Think of the difference in stimulation that attends these various conditions, and the effects produced upon the vessels of the respiratory passages as a result.

The influence of the varying content in light rays and in electric units under conditions of storm and pleasant weather, and the changes in barometric pressure under the same conditions, are immense factors in disturbing physiologic action. The normal 14.7 lb. of pressure per square inch of body surface which is found at sea level changes enormously at these times. Huntington says the increase of 1 in. in barometric pressure is equivalent to adding a weight 1,000,000 tons to each square mile of the earth's crust. This same relative change in pressure is experi-

enced by the human body and means an additional ton of pressure. A decrease in barometric pressure removes weight in the same proportion. These changes call for enormous adjustment. Think what they mean to the superficial body structures and to mucous membranes.

Increased permeability shows itself most frequently in the bronchial mucons membrane, but it is also frequently noticed in the nasal mucous membrane when no apparent inflammatory condition is present.

The type of hemorrhage which depends on these weather changes is most apt to occur at the time of day when atmospheric pressure is low. There are 2 maximum and 2 minimum periods of atmospheric pressure each day, and it is interesting to note that the lowest pressure is found in the early morning (about 4 a. m.), and that this is the time when most hemorrhages of this type occur. The second minimum occurs in the afternoon (about 4 p. m.), and this is another time in the day when hemorrhages occur.

TREATMENT

The treatment of pulmonary hemorrhage is dependent on the etiology of the disease. Psychology plays an important factor in the management. The excitable patient must be assured that the hemorrhage, no matter how large, can easily be controlled. Much depends upon the demeanor of both physician and nurse under circumstances which are often dramatic.

Absolute rest, physical and mental, is the first thing to be considered. The patient may assume whatever position is most agreeable to him, particularly when coughing. The dorsal position is unfavorable. Medical examination should be limited during the hemorrhage. Of medicaments we desire to say, that vasomotor depressants such as nitroglycerin, amyl, nitrite, and the nitrites generally, stand us in good stead. We are opposed to the general custom of giving morphia, owing to the fact that frequently, by its sedative action, the retention of clots causes development of bronchopneumonia. When sedatives are required, codein answers the purpose. Bromides, and particularly the sodium and strontium salts

are valuable and said to possess properties which increase coagulation.

The science of the coagulation accelerating substances has recently been seemingly put on a positive basis by Von Den Velden. According to this author, the patient is given one teaspoonful of dry salt upon the tongue, drink-1/3 of a glass of water afterward. Since the effects last about an hour, only a half teaspoonful of salt is given after 3 hours, even if no hemorrhage occurs. After another 6 hours a quarter of a teaspoonful is given. The author states that 5 c.c. of a 10% sterile salt solution may be given intravenously. We have given calcium chloride with less definite results, and desire to call attention to a recent study in relation to the administration of calcium salt, which we believe to be of value.

The administration of calcium salts. Calcium therapy has acquired a new interest in medicine along with the growing knowledge of the part this element may play in a variety of physiologic functions. These are no longer restricted to building of the inorganic structure of the bones—a feature in which calcium is the most conspicuous element and is involved to the extent of several pounds in the adult person. Calcium has also become associated in as yet vaguely understood ways with the regulation of nervous, muscular and glandular activities, and in coagulation of the blood; and it is believed to have some relation to variations in the permeability of the blood vessels and cells in such phenomena as transudation, the genesis of edema, and the appearance of urticarias. According to Sherman, the average calcium requirement of an adult person daily is about 0.5 gm. As comparatively few common foods yield the element in abundance, it can readily happen that the daily diet may fail to furnish the requisite amount. Furthermore, absorption of calcium seems to be modified in no small measure by alimentary conditions, notably the reaction of intestinal contents. These considerations lend an obvious importance to the problem of administering calcium in satisfactory ways when such therapy seems to be indicated. Intravenous and subcutaneous procedures are attended with dangers or discomfitures, therefore the

possibilities of the oral route call for careful consideration. Ordinary balance experiments afford only limited indications of the efficacy of ingestion of calcium-bearing substances because the alimentary tract is the seat of both absorption and excretion of the element. The fecal calcium may or may not have taken part in the tissue functions; a mere analysis of the output will not reveal the desired answer. Consequently, in recent years attention has come to be centered on the content of circulating calcium, which under normal dietary conditions is not appreciably changed.

A survey of the literature on absorption of calcium as it may be reflected in a change in the concentration of the element might leave one unconvinced as to the efficacy of giving calcium by mouth. Many clinicians have accordingly abandoned the practice. The more recent studies give evidence, however, that with due attention to conditions of administration it is possible to eliminate the serum calcium concentration by the oral route calcium supply. This is shown in the reports of Roe and Kahn. In experiments on man with calcium lactate, they believed the optimal dose of this salt to be 5 gm. This intake is adequate under normal conditions to produce definite increments in the blood concentration of calcium in the course of a few hours. Such results are obtained, however, only by ingestion of aqueous solutions when the digestive tract is comparatively empty; that is, either before breakfast or several hours after food has been consumed.

Simultaneous ingestion of various foods along with calcium lactate in large amounts is likely to produce a marked depression of the rate of absorption of calcium from the intestinal tract. In the case of foods, the resultant decreased hydrogen ion concentrations are probably responsible for the unsatisfactory outcome. The absorption of the element is notably depressed by a tendency to alkalinity in the path of absorption. Larger doses of the calcium salt probably prevent optimal absorption because they produce some irritation of the intestinal mucosa. It appears, therefore, that administration of calcium salts, notably calcium lactate, can be made therapeutically effective if

they are given in not too large amounts under essentially fasting conditions.

There are few known drugs that have not from time to time been drawn into service only to be discarded.

When ordinary measures fail, artificial pneumothorax remains as the outstanding mechanical treatment, which ordinarily will give prompt response, for we may use this method regardless of whether we are able to definitely locate the site of the lesion when hemorrhage is due to tuberculosis.

In conclusion, we desire to point to the outstanding facts revealed by the statistics of our institution:

(1) Hemorrhage was more frequent before admission to the institution.

(2) Sanatorium treatment and its accompanying rest cure reduce the number of hemorrhages, and thereby emphasize the importance of rest in the treatment of hemorrhage.

(3) Hemorrhage was responsible for causing but 30 deaths in our series of 2260 cases; in other words, hemorrhage as the cause of death occurred in but 1.3% of cases; hence with better technic and more frequent application of pneumothorax, we may confidently look for still better results in the treatment of pulmonary hemorrhage.

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COLLAPSE THERAPY IN PULMONARY TUBERCULOSIS

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By collapse therapy is understood a method of mechanical treatment having for its object the inhibition of lung function. It may be produced at many sittings, as in artificial pneumothorax, or suddenly as in thoracoplasty. It

may also be induced locally, as in phrenicotomy, pneumolysis, etc. It cannot be a substitute for sanatorium treatment but may prove itself of great service. Incipient cases or those progressing favorably with rest and fresh air are not to be subjected to it. The moderate and far advanced, stagnant or mildly progressive, acute or chronic, with or without cavitation are its special field; to these unfortunates it is the only ray of hope and often brings not only relief but improvement, arrest, even cure.

ARTIFICIAL PNEUMOTHORAX

Noting the beneficial effects sometimes produced by spontaneous pneumothorax, James Carson, of Liverpool, in 1822 followed up this observation with animal experimentation "to provide a suitable technic to induce pneumothorax for therapeutic purposes". William Stokes, in 1837, mentioned the favorable modification of pulmonary tuberculosis by pneumothorax in certain cases. Walter Hayle Walshe agreed with Stokes but states that "an occurrence so rare gives no warranty for the fanciful proposal to treat phthisis by producing artificial pneumothorax". Petain, in 1884, replaced the effusion in a hydropneumothorax with air and reported it as a "new method". Forlanini, of Pavia, recognized the value of artificial pneumothorax, instituted the treatment, proved its usefulness and recorded his experiences in the year 1894. He devised a safe, practical technic making the procedure available to the general medical profession. In 1898, J. B. Murphy, of Chicago, independently of Forlanini, induced artificial pneumothorax and reported 5 cases. The Forlanini-Murphy, or closed method, is in general use today.

SITE OF INJECTION

Success in inducing artificial pneumothorax is dependent on freedom from adhesions in the pleural space. Anatomically, the anterior and posterior axillary line and the subscapular space should be the point where thoracentesis is performed but in the diseased chest they are often occluded by dense membranes. As a rule, the further removed the puncture is from the major lesion the more the likelihood

of success. There is no reliable guide nor ideal point of election. Of course pleural friction sound should be looked for. Sometimes the fluoroscope and percussion, by noting excursion of the base of the lung during respiration, can give us observations of value as to free pleural space (excursion less than 10-12 cm. should be disregarded). Repeated punctures may be necessary. Forlanini, quoted by Fischberg, once made 14 before entering the cavity. The only sure way is to have the needle connected with the manometer so that entering a free pleural space will show a negative pressure.

TECHNIC

Preparation of apparatus, instruments, and operator is the same as for a major surgical operation. Patient is placed on table or bed, resting upon his affected side, hand extended above head and, if necessary, a pillow under the thorax. The skin is painted with iodine and any excess washed off with alcohol. The skin, intercostal muscles and pleura are successively injected with not more than 4 c.c. of 1% novocain solution. As the pneumothorax needle is blunt, the skin and subcutaneous tissue are incised by a single cut with a cataract knife. The needle is introduced through this small wound and, as it passes the subcutaneous tissue and muscle, the manometer registers zero. The moment the fascia on the inner side is reached, oscillation from respiration will be transmitted and show from -3 to +3. Carefully, the needle is pushed further in. The presence of free pleural space is disclosed by minus pressure of 5-10 cm. accompanied by larger respiratory oscillations, more marked on side of manometer connected with needle. Lack of movement of the fluid after scoring the above negative pressure means either that the visceral pleura is capping the needle air tight, that you are in the lung, or that it is clogged with blood. Slight withdrawal of the obturator will correct that. A plus pressure at this time and no oscillation during expiration denotes the lumen of the needle is in a blood-vessel; if in a bronchus, plus pressure during speaking or coughing, but when patient holds breath in inspiration or expiration, the manometric reading is zero.

In the presence of dense adhesions obliterating the pleural space the manometer shows zero; if the lung is entered under the same conditions it will still show the same.

When the manometer readings indicate that the needle is in the pleural space, 50 c.c. of air are allowed to flow in; facial expression and evidence of dyspnea being watched during this procedure. Additionally, 50 c.c. are admitted between manometer readings and not more than 250-400 c.c. are given at the first sitting; even less if the negative pressure becomes reduced too rapidly. When the operation is completed the needle is withdrawn, left index finger is quickly applied to prevent cutaneous emphysema, and the puncture is covered with cotton collodion.

Within 24-48 hr. a refill is given and this may be repeated every 2-3 days for from 3-6 weeks until satisfactory collapse is established. When this has taken place insufflations are made less frequently, from 3-6 weeks apart, depending on rate of absorption.

Satisfactory collapse may be prevented by adhesions. If the latter are of the thin stringy type they may guardedly be ruptured under higher pressure but not exceeding 2-4 cm. plus. Jacobaeus, of Stockholm, has devised a method of severing these adhesions. Two canulas are introduced through the intercostal spaces into the pneumothorax; in one canula is inserted a thoracoscope, an instrument similar to a cystoscope which enables the operator to see the adhesions to be divided; through the other canula is passed a galvanocautery with which the adhesions are burned through. Jacobaeus reports 120 cases so treated. The operation requires an unusual amount of skill and is only of service in exceptional cases.

TYPES OF PNEUMOTHORAX

(1) Expansile pneumothorax, where the intrapleural pressure remains below zero, the lung is somewhat collapsed but will dilate more or less with each inspiration.

(2) Static pneumothorax or pneumothorax of rest. Intrapleural pressure at zero. The lung is in a state of perfect rest.

(3) Compression pneumothorax. Intrapleural pressure above zero. The lung is not

only at rest but compressed. Its air capacity is reduced. Size, shape, volume and circulation are modified.

(4) Satisfactory collapse; also called complete collapse. A minimum amount of compression should be maintained to diminish the circulation and produce satisfactory clinical results. This is called a satisfactory collapse; in most cases it means a pneumothorax of rest although occasionally a pneumothorax of compression has to be employed; each case has its own optimum pressure and this has to be determined from the signs and symptoms plus the radioscopic appearance of the lung during the first week or 10 days of treatment.

Successful double artificial pneumothorax, administered for bilateral disease, induced simultaneously and also successively first on one side and in a few months on the other, has been reported in the literature, but its field of usefulness is restricted. Collapse not only affords rest to the lung and approximates the walls of cavities but it immobilizes and circumscribes active foci, reduces the area of infection, depletes the lung of detritus and dries up the source of toxic absorption. The lymph and blood stasis stimulate local tissue reaction; this in favorable cases is followed by cicatricial repair.

Statistics compiled from a large series of cases in which pneumothorax was completed or attempted show the following percentages: Satisfactory collapse, 38%; partial collapse, 42%; no free pleural space found, 20%.

The greatest number of pneumothoraces are performed between the ages of 18 and 50, although Armand Delille treated 44 cases between the ages 5 and 15; 12 in perfect health, 10 satisfactory results, 3 dead; he omits reports on the others. These children had been treated from 18 months to 2 years. Ziegler, going over his records, found that he had recommended it to 20% of all his patients. Sangman states from 4-8%. A conservative estimate is about 10%.

INDICATIONS FOR PNEUMOTHORAX

(1) In fairly early cases which do not respond to rest and hygienic treatment.

(2) Advanced predominantly unilateral lesions with or without cavities.

(3) Advanced predominantly unilateral lesions, patients semi-invalided.

(4) Pneumonic and bronchopneumonic types, but to get results from pneumothorax in this form a satisfactory collapse is essential and it should be instituted before the end of the fourth week.

(5) Tuberculous pleuritis with effusion. This type is treated by aspiration of the exudate and its replacement with air.

(6) Hemorrhage (extensive). Artificial pneumothorax is imperative in these cases because not only does it put a quick end to bleeding if a satisfactory collapse can be obtained but it lessens the danger of aspiration. Pneumothorax once begun in such an emergency should not be discontinued if patient is otherwise suitable for the treatment.

CONTRAINDICATIONS

(1) Early phthisis which is becoming arrested under rest treatment.

(2) Miliary tuberculosis.

(3) Extensive progressive disease in both lungs (there are exceptions).

(4) Extensive tuberculosis elsewhere in body. Laryngeal tuberculosis, if not too extensive, usually improves with successful pneumothorax. Tuberculous enteritis is not a contraindication if it does not interfere with nutrition.

(5) Asthma and well-marked diseases of heart, kidney, or blood-vessels.

COMPLICATIONS

(1) Gas embolism and pleural shock. Matson and Bisailon report 4 cases of gas embolism in 1200 insufflations, 2 of which were fatal; they also mention the syndrome pleural shock as occurring 15 times in the same series of cases without any fatality. It is now their custom, where slight manometric oscillations indicate adhesions, to first introduce normal salt solution through the pneumothorax needle and no embolism cases have occurred since this method has been employed.

(2) Subcutaneous emphysema causes discomfort but is not of practical importance.

(3) Spontaneous pneumothorax occurs in

3% of cases. It may be localized and not be productive of any symptoms, or be the cause of severe pain and dyspnea, ulceration of a superficial caseous focus or sudden rupture of a superficial cavity.

(4) Empyema occurs in 12% of cases. The longer the pneumothorax is maintained and the more widespread the disease, the more frequently is empyema a complication. It is important to aspirate a tuberculous empyema early and often, supplemented by irrigation with normal or hypertonic salt solution if necessary, to effect its early permanent disappearance; for the reason that the prolonged presence of empyema enhances the danger of lung perforation. Half of the aspirated fluid should be replaced with saline solution. Airtight tube drainage with constant suction under negative pressure is employed before rib resection is advised.

(5) Pleural effusion is present in about 75% of cases. It may be slight in amount and be overlooked, or in larger quantity and interfere with respiration. It may disappear and be found again at a subsequent examination. About 20% require aspiration and replacement with air.

(6) Extension or development of contralateral lesion. It is the most frequent of the serious complications, usually appears in the first 6 months of treatment, but may heal spontaneously if satisfactory collapse can be maintained and the patient put on absolute rest in bed.

(7) Early obliterating pneumothorax before the salutary effect of collapse could be obtained.

DURATION OF PNEUMOTHORAX TREATMENT

The usual life of a satisfactory pneumothorax is 2-4 years; in the partial cases it is likely to be shorter. Refills however have been given for as many as 8 years. There is a constant tendency to obliteration of the pleural space. Insufflations given for a shorter period or a few months have shown surprisingly good results. Discontinuance of a pneumothorax with free pleural space before 2 years often leads to a reawakening of the focus of infection.

RESULTS

In favorable cases, within a few days to a few weeks after collapse the temperature declines, heart beat slows up, sputum is reduced in quantity and bacilli disappear. The patient is reinvigorated, may continue to gain weight and strength indefinitely and again be restored to capacity for work; but it must not be forgotten that pneumothorax does not arrest tuberculosis at once. It only facilitates healing; it is still a tuberculosis case and must undergo prolonged treatment.

As to remote results, statistics given by most authors are misleading because cases unable to receive pneumothorax are used as controls; clinical recoveries as recorded by most leading phthisiotherapists are about equal.

Eduard Rist, of Paris, in an article recently published in the American Review of Tuberculosis, while classifying his adhesion cases uses the patients who were subjected to pneumothorax treatment as his controls. He tabulates his cases thus: (1) Those in which pneumothorax was performed. (2) Those in which he was unable to perform it. (3) Those in which pneumothorax was advised but patients did not submit to treatment.

The table of 759 cases is herewith given: Successful pneumothorax performed.

Healed	51,	6.5%	
Clinically well; symptom-free, working, but still under treatment	336,	45.5%	
			—52%
Condition unchanged	33,	4 %	
Bilateral, alive	99,	13.5%	
Dead	240,	30.5%	
			—48%

94 adhesion cases.

Able to work	8,	8.5%
Living in institution; unable to work; condition unchanged	35,	37.2%
Dead	51,	54.2%

74 cases; refusals.

Condition unchanged	13,	18%
Worse	22,	29%
Dead	39,	53%

This shows that where pneumothorax was successfully completed, 52% became self-supporting, useful members of society, while in adhesion cases only 8.5% were able to work. Of the refusals, all were either unchanged, worse or dead. It is by comparing

the latter cases, which to all appearances were on a par with the first ones and entitled to a 52% recovery rate, that the striking benefits of pneumothorax are brought in relief.

THORACOPLASTY

That in a goodly number of cases the results of pneumothorax leave much to be desired cannot be denied; again, in another class of patients, a pneumothorax cannot be realized. A larger percentage of both these types can be strikingly benefited by rib resection or thoracoplasty. The field of thoracoplasty is much more restricted than that of pneumothorax, the operation is more shocking, more deforming and irrevocably permanent. Pneumothorax, if necessity demands, can be abandoned and the lung permitted to reëxpand. In thoracoplasty the lung is permanently at rest. Thoracoplasty adds rigidity of chest wall to compression, a great advantage as pointed out by Lilienthal.

The first plastic operation on the thorax as a part of mechanical treatment of tuberculosis was recorded in 1885. Truc and Dr. Cervenille both resected ribs to obtain retraction of the underlying cavities. Quincke also proposed the operation for the noncavernous type of tuberculosis. These operations had only a local effect; short pieces of bone had been removed at the site of the diseased focus. The advent of pneumothorax demonstrated that not only collapse of cavities but rest of the affected lung was essential.

Brauer recognized that partial thoracoplasties were ineffective and that analogous results to pneumothorax could only be obtained through ample and extensive resections. This marked the inception of the Brauer-Friedrich operation. Friedrich, first to perform it in 1907, resected from the second to the ninth rib. He made a horseshoe-shaped incision going down the front of the chest across the axilla up between spine and scapula, removing 10-25 cm. of each rib; also intercostal muscles and periosteum. He secured good compression but a lung hernia was the result. A modification which left muscle and periosteum in situ, embraced also the first and tenth rib, showed an operative mortality of 29.6%.

Aside from that it was accompanied by tremendous shock, extensive mediastinal displacement, and flutter and marked paradoxical respiration (a vicious circle of the air from the operated lung going to the healthy lung and vice versa).

Boiffin and Gourdet demonstrated that resection at the level of the angles of the ribs caused the greatest diminution in the size of the hemothorax and was more advantageous than removal in lateral and anterolateral region.

Wilms profiting by the experiences of the last named authors, in 1911 performed his first extrapleural paravertebral costectomy under local anesthesia. He removed from 3-4 cm. each of the first to the eighth ribs inclusive. Willis called it "columnaed resection" and later modified it by removing from 6-12 cm. of the lower ribs and proportionally smaller segments in the upper thorax.

Sauerbruch, in 1909, removed part of the first rib "from below and behind" for apical collapse; during the operation the clavicle was fractured but the patient obtained excellent compression. He then resected the anterior portion of the upper 4 ribs. All his cases—4 in number—developed aspiration pneumonia and 2 died. On account of that and following the new orientation of Wilms, Sauerbruch first resected the lower ribs at costal angle and at a later date the upper ones in the same location; the two-stage operation. So the Wilms-Sauerbruch is the standard operation at this time.

INDICATIONS

As mentioned before, the field of thoracoplasty is more restricted than that of pneumothorax; it should not be done before the age of 15 nor above 50. If, after prolonged observation, the phthisiotherapist finds that his case is not being benefited or not improving under rest and fresh air, that a pneumothorax is not feasible, that the likelihood of activating the existing disease by an operation is not too great, and that the lesion on the other side, if any, has not recently been active, he should consult a surgeon. The latter, after ascertaining all facts, being assured that the case is becoming hopeless, examining the pa-

tient, visualizing his resistance to surgical trauma and to immediate physical changes brought about in the vital organs by the operation itself, decides whether the case is a good enough surgical risk. There is no time and no condition where teamwork of the phthisiotherapist, radiographer and the surgeon is more essential than at this juncture.

THORACOPLASTY INDICATIONS

(1) For patients in good general condition who have predominantly a unilateral lesion of chronic advanced fibrosis with or without cavitation, especially when a pneumothorax has failed or is impracticable. These cases have a recovery rate of 80-90%.

(2) Severe persistent tuberculous or mixed infection empyema.

(3) Cases in which the lesions in the worse lung are caseous, pneumonic and actively progressive.

(4) In cases of incomplete pneumothorax with or without pleural effusion where additional compression is an essential to life.

(5) It is also indicated in a fair percentage of chronic cases, with mainly unilateral involvement, for repeated hemorrhages if pneumothorax cannot be completed.

(6) In some cases of mediastinal displacement (to aid a shrunken lung).

CONTRAINDICATIONS

(1) Cavity or evident active area especially if at hilum or base of good lung.

(2) Cardiovascular disease; myocarditis is a definite contraindication.

(3) Bone or joint disease.

(4) Kidney lesions.

(5) Severe types of diabetes.

(6) Intestinal tuberculosis.

(7) Laryngitis, if not too severe, is improved.

COMPLICATIONS

(1) Early cardiac failure.

(2) Aspiration pneumonia.

(3) Novocain poisoning.

(4) Pneumonia.

RESULTS

The immediate results in favorable cases

are akin to those of pneumothorax only they supervene more suddenly.

Results of a series of cases collected by Alexander, 1159 in number.

Apparently cured	24.8%	
Clinically cured	12%	
Total cured	36.8%	36.8%
Greatly improved	8.4%	
Somewhat improved	16%	24.4%
<hr/>		
Total cured and improved		61.2%
Unchanged	2.7%	
Worse	2.6%	
Total living and unimproved		5.25%
Dead from causes directly or indirectly connected with operation	14.1%	
Dead from other causes	19.4%	
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Total dead and unimproved		33.5%
<hr/>		
Total dead and unimproved		38.75%

DEDUCTIONS

The cases submitted to pneumothorax and thoracoplasty are usually more or less hopeless. A tuberculous joint is immobilized, why not a lung?

Tuberculosis is not a self-limited disease; expectant treatment is not always advisable nor always adequate.

Delay in advising pneumothorax or thoracoplasty lessens patient's chances; increases surgical risk.

group of delirium cordis the entity now known as auricular fibrillation. The literature of the past 20 years abounds in references to the use of digitalis in auricular fibrillation; indeed, Barker¹, in a recent splendid review of this subject, details 164 original contributions to this problem. In the light of these investigations the haphazard administration of digitalis has given way to a rationale of therapy based upon adequate scientific control. With the now wide-spread employment of the *intensive methods* of digitalization under the routine of Eggleston and Pardee, the previously wide margin of safety in the use of digitalis has been considerably diminished:

The clinical development of nausea, vomiting, and a slow pulse, have been the important guide posts of approaching digitalis overdosage. Occasionally, however, these signs may, in fact, be associated with under-digitalization as has been pointed out by Hyman². At the bedside the control of digitalis therapy is usually readily ascertained by the marked improvement in the patient's general condition as well as the lessening or complete disappearance of the pulse deficit. Improvement in quality of the heart sounds, the disappearance of edema with the associated water balance change, and recovery from other congestive phenomena in the lungs and liver, indicate to the attending physician the need for greater or lesser administration of the drug.

Recently, however, Jensen³, Hofrichter⁴, Chester⁵, Luten⁶⁻⁷, Bastedo⁸, Stroud⁹, and others, have demonstrated that digitalization of the heart is usually accompanied by well recognized changes in the electrocardiographic records made upon such cases. Inversion of the terminal ventricular complex, or T wave, where it has previously been upright, is most commonly found. In addition to this, a coupled rhythm, consisting of a normal heart beat followed by an extrasystole, is noted in patients approaching digitalis overdosage; occasionally the coupled rhythm may be detected clinically but when the extrasystole is of the noneffective or exhaustive type it may be overlooked even on very detailed examination of the radial pulse. In such cases the electrocardiograph offers information of extreme im-

ELECTROCARDIOGRAPHIC CONTROL OF ACTIVE DIGITALIZATION IN AURICULAR FIBRILLATION

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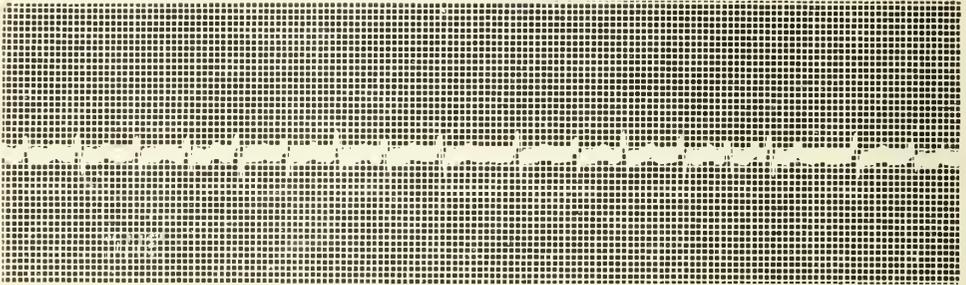
Few contributions in medicine have been followed more zealously than Whithering's paper upon the use of fox-glove in certain affections of the heart. The prompt response of the failing heart to the use of digitalis has excited the attention of innumerable medical and lay investigators. In the condition known as "delirium cordis", this drug was found particularly effective. As a result of Mackenzie's studies, there was separated from the old

portance, so much so that where such graphic apparatus is readily available the administration of digitalis should be controlled by frequent electrocardiographic studies.

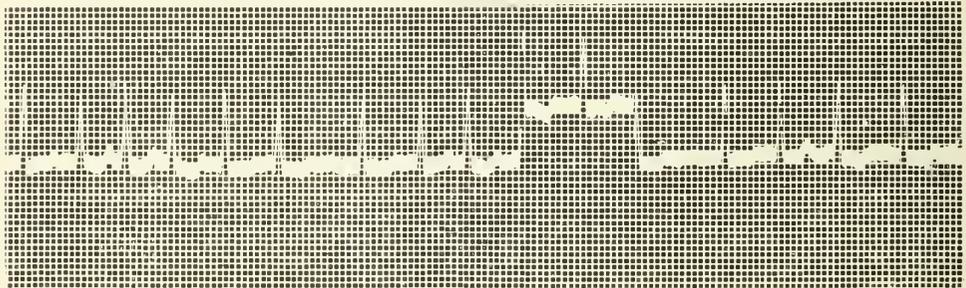
The following case is illustrative of such a procedure:

and had 1 child 4 yr. old. For the next 2 years she began to experience attacks of palpitation which seemed to occur after extreme effort. The following year her family physician made a diagnosis of auricular fibrillation. She was given a course of digitalis therapy which

Lead I.



Lead II.



Lead III.

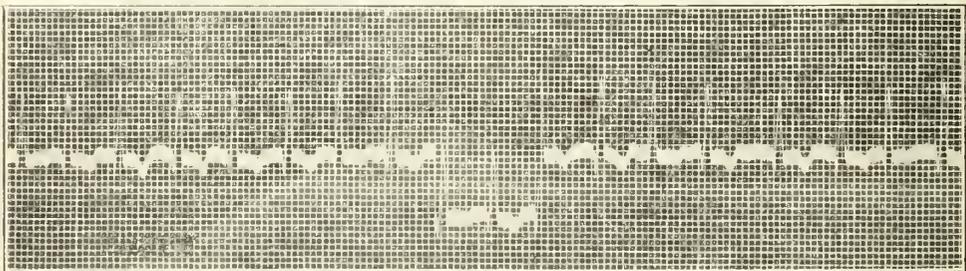


Fig. No. 1

Mrs. J. B., age 36, American, housewife. Previous rheumatic history at 14, followed about 5 years later by evidence of mitral disease. Rejected for life insurance at the age of 30, at which time she was told by the examining physician that she had 2 leaking valves. Up to this time she had suffered no symptoms referable to her cardiovascular system. She had been married then for 6 years

relieved most of her symptoms. Since that time she has visited many doctors and has been on and off the usual digitalis preparations innumerable times. When first seen by us, she was complaining of shortness of breath, palpitations, epigastric pain, a slight cough and edema of the legs, and cardiovascular study made at that time revealed the following:

The patient was decidedly underweight for

her age and height group (height 63 inches, weight 110 lb.). There was no evidence of cyanosis.

Physical examination of the heart: On percussion the superficial area of cardiac dullness was increased to the left. The heart sounds were clearly heard over entire precordium. At the apex, both the first and second sounds had about the same tonal intensity. At the base the second pulmonic area was louder than the second aortic. All valve closures seemed to be synchronous, but only of fair tonal quality. The dominant rhythm of the heart was very irregular. The apical rate varied from 120 to 150 per minute. Not all of the apical beats were transmitted through the radial pulse. There was a pulse deficit varying from 20 to 30 per minute. The Rehfisch test was negative—breath held for maximum of 25 seconds with no change in the pulse rate. Arising in the mitral area but heard over the entire precordium was a rather loud, blowing systolic murmur, which varied in quality from time to time according to rapidity of the ventricular contractions.

The orthodiographic measurements were as follows: Aortic arch 7.2 cm.; diagonal diameter 14.8; showing marked enlargement.

The fluoroscope showed a configuration of mitral type with marked hilar clouding.

Clinical blood pressure levels were established as systolic 122 and diastolic 60.

The lungs were clear, liver and spleen not enlarged, no tumors or ascites, a slight edema of lower extremities present.

Electrocardiographic studies at this time showed a rapid auricular fibrillation.

Patient was put to bed and placed on massive doses of digitalis equalling about 2 gtt. per lb. of body weight. At the end of the third day she had received a total of 320 gtt. of the tincture, equalling 32 gr. of the dried leaf. Her condition clinically became markedly improved; dyspnea disappeared; and the edema of the legs, while still present, was appreciably diminished. At this time she began to complain of slight frontal headache, and said that the palpitation while less rapid was more violent. Her apical rate now varied from 60 to 90 beats per minute, with no pulse

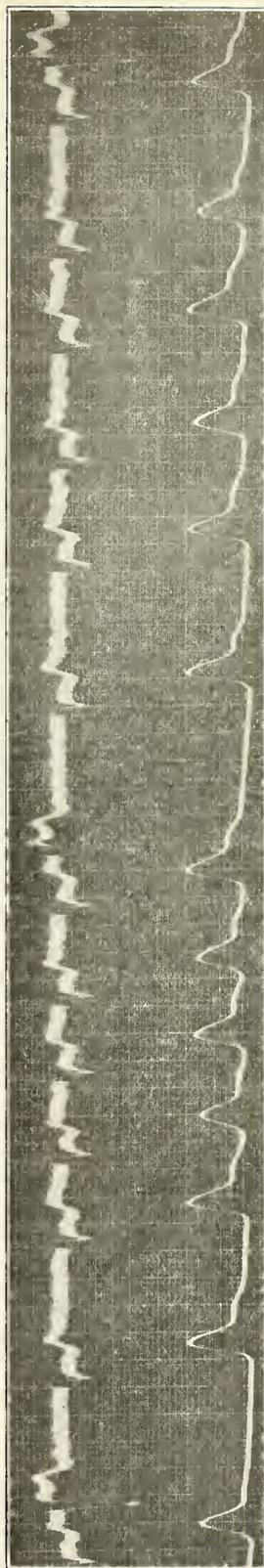


Fig. No. 2.

deficit. Careful examination of the pulse and heart sounds established the presence of a coupled rhythm.

Electrocardiographic and polygraphic studies made on September 16, 1927, revealed a rather slow, coarse circus movement, which at times barely changed the isoelectric line. The QRS complexes were dominantly upward; their transmission time measured 0.1 sec., the upper limit of interventricular contraction. The T waves were inverted and may be described as belonging to the "Oppenheimer group", i. e. the initial limb of the T wave is bowed while the second limb arises above the isoelectric line, giving rise to a diphasic wave, which is, however, dominantly downward. After every fifth to eighth ventricular complex there was a very premature left ventricular extrasystole, more or less compensated. This coupled rhythm was more often heard over the precordium than it could be palpated in the radial pulse. The radial rate varied from 60 to 90 per minute.

The clinical evidence of overdosage in this case was readily confirmed by these electrocardiographic studies, and the digitalis was promptly reduced. The patient from then on improved sufficiently to go home and is being kept on an average daily maintenance dose of digitalis amounting to about 4 gr. of the powdered leaf.

This case is interesting in demonstrating the value of information secured from electrocardiographic studies during a course of digitalization. The discovery of the T wave inversion and the extrasystoles forming the coupled rhythm immediately suggested the onset of digitalis overdosage, which, if not promptly relieved, might have caused the patient to have experienced the dire effects of nausea, vomiting, and a general gastro-intestinal disturbance leading to an anorexia which is overcome with great difficulty.

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QUINIDIN THERAPY; USES AND CONTRAINDICATIONS IN AURICULAR FIBRILLATION

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We approach the subject of quinidin therapy with a certain amount of hesitation. Like all new remedies, it came into disrepute because of its indiscriminate use by physicians who were satisfied with the most meagre description of its value and action. As in the case of all new agents, enthusiasm carried away good judgment, only to be followed by a period of depression and of opposite reaction still very difficult to overcome. After Wenkebach's monumental work, and after that of other pathfinders of unquestionable observational and experimental ability, the proper use of this valuable remedy has been rendered clear, and it is the object of the authors to reiterate its proper place in the medical armamentarium.

In writing this article no claim to originality is made. We have availed ourselves liberally of the writings and experiences of others, and have added our own backed by graphic corroboration. We shall attempt to give here a short description of the pathology of auricu-

lar fibrillation, the pharmacology of quinidin, and its therapeutic uses and contraindications, laying stress particularly upon its proper method of employment in the entity known as auricular fibrillation.

In auricular fibrillation there exists a condition of the auricles in which stimuli of various contractile strengths are constantly being discharged from innumerable ectopic foci outside the normal pacemaker—the sino-auricular node. The uppermost limit of stimuli possible to be discharged from the pacemaker is about 350 per minute, as exists in auricular flutter. In auricular fibrillation, however, the conglomeration of so many rapid rates from so many abnormal pacemakers makes too many stimuli able to be effective to cause ventricular contractions for each individual stimulus, and one chief condition arises, namely, the inception of a circus movement in specialized auricular tissue. In this circus movement each stimulus pursues somewhat of a circular course. Small portions of auricular muscular tissue contract independently of other portions of muscular tissue, bringing about a paralyzed auricle in diastole, never contracting completely or partially.

The circus movement itself depends upon 3 factors: (1) length of its path, (2) conduction rate of the impulse, (3) and length of the refractory phase itself. The effect of quinidin in auricular fibrillation depends upon the alteration of one or more of these factors, plus its vagus and ventricular effects. The drug (1) diminishes the sino-auricular rate, (2) increases the refractory period of the auricular musculature, and (3) diminishes the rate of conduction in the path of the circus movement, along the auricular-ventricular tissues and along the ventricle. In this circus movement, quinidin acts chiefly to bring about an increase in the refractory period of each circuit. If the first factor predominates, the circus movement will cease; if the second factor predominates, the circus movement will increase. This explains its successes and failures in different cases of auricular fibrillation. The clinical effects produced by its administration to patients suffering from persistent auricular fibrillation are: (1) a progressive

diminution of the auricular rate, (2) a simultaneous increase in the ventricular rate, and (3) frequently a cessation of the auricular fibrillation with a return to the normal rhythm. The sequence of effects of the drug is: fibrillation to impure flutter, to pure flutter, to restoration of the normal rhythm.

With a decrease in the circus movement a greater number of auricular impulses becomes transmitted and effectual in the ventricle, tending to bring the ventricular rate up to the auricular rate. If the auricular rate falls to 200 or under, there is danger of the ventricular rate taking up that of the auricles. Furthermore, an assumption of a rapid ventricular rate is enhanced by the additional property of quinidin to tend toward paralysis of vagus action, and thereby to discontinue the vagal block effect of rapid impulses from auricle to ventricle. This is one of the dangers of quinidin therapy. This effect may be prevented somewhat by complete digitalization of the patient before the administration of quinidin, because digitalis, by stimulating vagal action, brings about a decreased conduction of auricular impulses to the ventricle.

SUITABLE AND UNSUITABLE CASES FOR QUINIDIN THERAPY

There are suitable and unsuitable cases for quinidin therapy, which, fortunately, may be usually clinically determined. Suitable cases are those with: (1) fibrillation of recent onset; (2) no valvular diseases, or any organic myocardial damage; (3) fibrillation associated with the acute infections, especially pneumonia, influenza, pyelitis and early rheumatic heart disease; (4) no cardiac enlargement; (5) fibrillation associated with hyperthyroidism with only moderate myocardial damage present.

Unsuitable cases are those with: (1) badly damaged hearts with marked hypertrophy and dilatation of long standing; (2) chronic valvular disease; (3) history of embolism, especially associated with mitral stenosis; (4) acute and subacute bacterial endocarditis; (5) an idiosyncrasy to cinchona products; (6) severe degree of cardiac failure; (7) organic heart disease of over 3 years' duration.

SOME OF THE DANGERS OF QUINIDIN THERAPY

Among the severe effects which may follow quinidin therapy are embolism and cardiac failure with or without death; during the transition of the auricular fibrillation to the normal rhythm, there may occur, in addition, ventricular standstill or ventricular fibrillation. Less severe effects are those in reality due to either mild cardiac failure or cinchonism; they may be headache, nausea, vomiting, pyrexia, tachycardia, palpitation, precordial pain, abdominal pains, scarlatinaform and morbilliform eruptions, urticaria and mental symptoms.

CLASSIFICATION OF TYPES OF AURICULAR FIBRILLATION

There are 3 types of auricular fibrillation in which quinidin therapy is successful or unsuccessful: (1) the established type, (2) the transient type, (3) the paroxysmal type.

(1) The established type. Here the abnormal rhythm has been longer than 2 weeks in duration, and presence of the irregularity is not dependent upon a transient etiologic factor. Where cardiac damage is permanent, the drug is useless. The percentage of success in this entire group is usually 55-60%.

(2) The transient type. Here the abnormal rhythm depends upon some transient cause, such as an acute infection, an operation, especially after cholecystectomy, and toxic goiter. The effect of the drug in this group is often spectacular, but it is not definite at all times whether the drug brought about the beneficial effect obtained or whether alleviation of the etiologic agent brought about disappearance of fibrillations. It is advisable not to give quinidin for at least 6 weeks after thyroidectomy.

(3) The paroxysmal type. Here the normal rhythm is suddenly interrupted by periodic attacks of fibrillation lasting from a few minutes to several days. Quinidin in doses of 0.2 to 0.8 gm. daily lengthens the interval between attacks and shortens the length of attacks, if they occur at all.

EFFECT OF QUINIDIN UPON THE ELECTRO-CARDIOGRAM

The effect of this drug upon the electrocardiogram is quite inconstant. Where the

picture shows coarse fibrillation, the effect of quinidin is likely to be best. The occurrence of poisoning by quinidin is shown by coupled-rhythm, marked deflection of the T wave, and isolated or regularly placed extrasystoles.

METHOD OF TREATMENT WITH QUINIDIN

The safest plan is to hospitalize the patient for at least his first course of treatment. Complete rest in bed should be observed. Complete digitalization without over-digitalization is necessary before quinidin is given. When the pulse rate is from 70 to 80 per minute with digitalization, and the pulse deficit has fallen to a minimum, quinidin therapy may be begun.

First day—2 doses of 0.2 gm. each are given at intervals of 2 hours to test for the presence of an idiosyncrasy to cinchona products. If this is found to be present, the treatment is discontinued at once.

Second day—3 doses of 0.4 gm. each at intervals of 2 hours.

Third day—4 doses of 0.4 gm. each at intervals of 2 hours.

Fourth day and thereafter—5 doses of 0.4 gm. each at intervals of 2 hours.

Treatment is continued for a week. Frequent electrocardiographic tracings afford means of following the heart action with a certain degree of accuracy. Not more than 2 gm. of the drug should be given during any 24 hour period. A second course may be successful where a first course failed. Infrequently, the 2 test doses bring about normal rhythm.

With the establishment of normal rhythm, 0.2 gm., given morning and evening, very frequently maintains this normal rhythm. Usually, with cessation of medication, return to the former arrhythmia obtains, especially in the established and paroxysmal types of auricular fibrillation.

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CONGESTIVE HEART FAILURE AND RESPONSE TO NOVASUROL THERAPY

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All clinicians have encountered refractory cases of long standing congestive heart failure, with marked edema. The usual method of digitalization in this group of cases did not induce a diuresis. Because of this fact, digitalis was continued on the basis that complete digitalization was not effected. Many of these cases exhibited marked symptoms of digitalis toxicity, i. e. nausea, vomiting, marked weakness, pain in the abdomen, and delirium. The electrocardiogram tracing showed premature beats, inversion of the T wave, diminished excursion of the QRS complex, and a prolonged P-R interval, varying from 0.18-0.22 sec. When these symptoms were recognized, digitalis was promptly discontinued, and large doses of caffeine were administered intramuscularly.

Levy, at the New York City Hospital, anticipating the fact that these long standing cases of edema due to congestive heart failure did not respond to digitalis, used novasurol, inducing a marked diuresis where other measures failed. Ammonium chloride was used in association with this drug and was found to enhance the value of novasurol in producing a greater output.

Novasurol was first used in Germany, about 9 years ago, for the treatment of syphilis. It

contains approximately 34% mercury, but is administered in the form of a 10% solution by the intravenous or intramuscular route. Saxl and Heilig¹ pointed out its diuretic value and since then it has been used almost solely for that purpose.

The following effects were noted concerning its intravenous or intramuscular administration: (1) Its diuretic effect begins within 2-4 hours. (2) The excretion of water and chlorides is greatly increased. (3) In these cases of congestive heart failure, there was no kidney injury produced by the drug. (4) Toxic manifestations were noted in a small group of cases.

These toxic manifestations were all attributable to mercurial poisoning: stomatitis, hemorrhagic colitis and salivation. When these symptoms were observed, sodium thio-sulphate was given intravenously and orally, with some alleviation of the oral and intestinal conditions.

The dosage used was 1 c.c. intravenously. The following 24 hour output varied from 2500 to 4000 c.c. Where the edema was still present, a second and third injection were given at 48 hour intervals. Ammonium chloride was given in doses of 30 gm. 3 times a day for several days, and in all these cases the diuresis was marked. Keith, Barrier and Whelan² have shown the striking results of ammonium chloride and novasurol with its resulting diuresis.

That novasurol has produced a diuresis where digitalis, caffeine, theocin and other diuretics have failed, is generally established. Marvin³, in a recent paper, reported favorable results in a series of cases, where all therapeutic measures were of no avail in the production of a diuresis. He adds that there can be no question that novasurol proves an extraordinarily efficient diuretic after others have failed. Levy is of the opinion that in the absence of nitrogen retention, and where the diagnosis of congestive heart failure with no kidney involvement is established, novasurol and ammonium chloride therapy are the ideal drugs, in these cases of massive edema.

The following cases show the marked response to novasurol, where other therapeutic

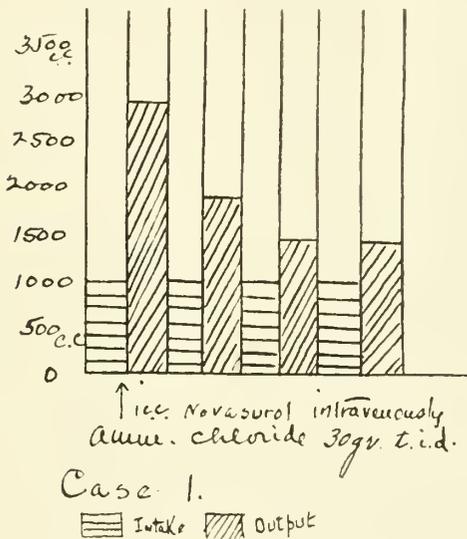
measures have failed in the production of a diuresis.

Case 1. J. A., male, age 52, complaining of shortness of breath, and swelling of the ankles, duration 2 years. Past history essentially negative with exception of pneumonia 5 years ago.

Physical examination revealed a plethoric male, slightly cyanotic. Head negative. Chest showed roughened breath sounds with moist râles at the bases. The heart was enlarged to the right and left, with a systolic blow at the apex. Blood pressure: systolic 172, diastolic 98. Pulse regular in rate, rhythm and force. The liver was slightly tender, and palpated 3 finger breadths below the costal margin. There was marked edema of the lower extremities.

The electrocardiogram showed a left ventricular preponderance, with inversion of the T wave in lead 1. Urea nitrogen 14 mgm. per 100 c.c. blood. Urine showed albumin 2 plus, with a few hyaline casts.

Patient was digitalized by the Eggleston method, but with no diuresis after 7 days. Ammonium chloride was then prescribed, 30



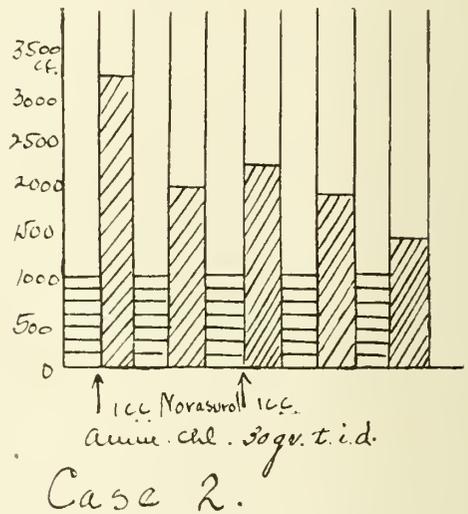
gr. 3 times a day, and on the third day novasurol was administered intravenously. Intake during this period was limited to 1000 c.c. The output during the 24 hours was 1870 c.c., and the following day was 1870 c.c. The edema of the extremities had markedly sub-

sided. Only 1 injection of novasurol was given.

The patient was put on a salt-free diet, and has had no recurrence of his decompensation.

Case 2. M. H., male, 59 years of age, complaining of swelling of the legs and shortness of breath of 8 months' duration. Noticed that when he climbed stairs he could not get his breath and would have to rest for several minutes. Five months ago, a suprapubic drainage was done to relieve bladder retention due to urethral stricture. Since then his ankles swelled and his shortness of breath became more pronounced. Past history essentially negative.

Physical examination revealed an edematous male, slightly dyspneic, with moderate conjunctival pallor. The chest showed congestion of the bases with moist râles throughout. The left border of the heart was 12.5 cm. from the midsternal line, in the fifth inter-



space. Blood pressure 130/100. Pulse regular in rate rhythm and force.

The liver was markedly enlarged, and both legs were edematous. The electrocardiogram showed a left ventricular preponderance, QRS group wide and notched, with inversion of the T wave in leads 1 and 2. Urea nitrogen 22 mgm. per 100 c.c. Urine showed a trace of albumin with numerous granular and hyaline casts.

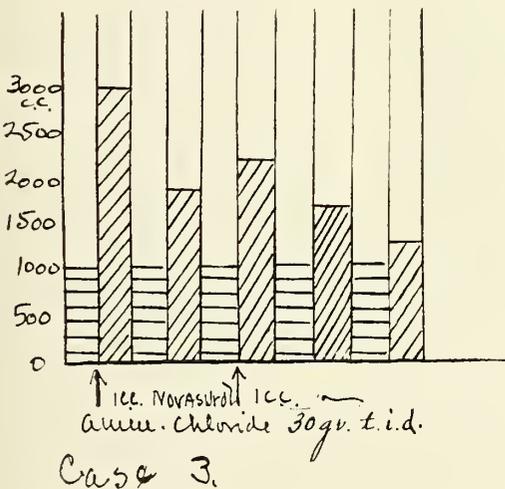
Digitalis therapy produced no diuresis. Ammonium chloride in 30 gr. doses, t.i.d., and

1 c.c. novasurol intravenously were given with resulting output of 3200 c.c. in 24 hours. On the third day, another 1 c.c. was given, with the resulting output of 2200 c.c.

The edema of the legs decreased, with marked improvement in the general condition. On a salt free diet, the edema has not recurred, and patient has been able to get back to work.

•Case 3. J. M., male, age 46, complaining of marked shortness of breath, and swelling of the ankles. One year ago, fainted after a heavy meal, and since then has noticed that he tired very easily, and on the slightest exertion became short of breath. Six months ago, had to be propped up in bed due to orthopnea and massive edema. History of pneumonia and pleurisy 8 years ago, with prolonged convalescence.

Physical examination revealed an orthopneic male, slightly cyanotic. Head negative. The



chest showed moist râles throughout. The heart was enlarged to the right and left, with a soft, blowing systolic murmur at the apical area. Blood pressure, 156/100. Pulse regular. The liver was enlarged and tender. Massive edema of the legs.

The electrocardiogram showed inversion of the T wave in leads 1 and 2, and a left ventricular preponderance. Urea nitrogen 27 mgm. per 100 c.c. blood. Urine contained albumin 2 plus, and granular casts.

Put on Karrel diet, and with digitalis therapy followed by diuretin for several days,

very little response was obtained. Ammonium chloride was given in the usual dosage, and 1 c.c. novasurol was given intravenously. There was a marked diuretic effect, with an output of 2900 c.c. in the following 24 hours. Novasurol, 1 c.c., was repeated on the third day with an output of 2200 c.c. There was a marked subsidence of the edema, with improvement of the general condition.

SUMMARY

- (1) A series of 3 cases of congestive heart failure are reported in which digitalis and caffeine therapy did not induce a diuresis.
- (2) Novasurol in 1 c.c. doses administered intravenously, with ammonium chloride, induced a marked diuresis within 24 hours.
- (3) No toxic effects of novasurol were observed.
- (4) On a salt-free diet, there was no recurrence of the edema, after dehydration was once established. The third case could not be followed up.

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THE ACUTE ABDOMEN

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In presenting a paper under the above title I do not presume to add anything to medical literature, but simply to call attention to the leading points of diagnosis in the average cases, especially acute appendicitis, which come to your attention.

The acute abdomen always presents to the patient and his family an alarming condition, and taking up a number of cases from hospital experience over a term of several years the causes of the acute abdomen in more than

50% are primarily due to the appendix. This being so, and as some appendiceal cases are very rapid in progress, an early and correct diagnosis is most essential.

Taking symptoms in detail, the typical acute appendix starts in the following manner: the first symptom, abdominal pain; second, nausea with or without vomiting; third, tenderness; fourth, rigidity; fifth, fever; and sixth, leukocytosis. This, of course, is the typical and well-marked case. At times some of these symptoms may be missing, and some more prominent than others, but the order of their appearance is almost always fixed as to time and appearance.

The abdominal pain begins usually in the epigastrium and the umbilical region. It may, however, be in the lower abdomen or as a general colicky pain all over the abdomen. The suffering generally is severe and after a variable period, from 3 to 24 hours, moves downward to the right and is at its maximum intensity in the right iliac region. If the pain begins over the appendix the presumption is against a true appendicitis. Nausea or vomiting, one or both, follow the initial pain either immediately or within an hour or two. Usually the stomach contents are ejected and sometimes even the duodenum material mixed with bile may be seen. In a few cases only nausea is present. The significance of pain and vomiting, the very characteristic symptoms, are due to a reflex spasm of the pylorus, sympathetic to the action of the ileocecal valve through the nerve system to the solar plexus, which is the location of the initial pain.

Every acute attack of appendicitis is associated with nausea or vomiting as its second symptom. When vomiting occurs, coming on with or before the pain, one should always think of the acute infective diseases, such as scarlet fever or meningitis, which invariably begin with vomiting. If the vomiting precedes or is not coincident with the pain an appendicitis usually may be eliminated.

The third symptom, tenderness, is restricted to the right lower quadrant of the abdomen in a spot known as McBurney's point and does not necessarily correspond to the base

of the appendix but more nearly to a portion of the cecum above and to the inner side of its junction with the appendix. It represents the position of the sensitive nerve endings on the abdominal wall and affords valuable clinical evidence of the existence of acute appendicitis. Dr. Charles McBurney, of New York City, was a pioneer in the diagnosis of and operation for appendicitis. For several years, at that period, the diagnosis of appendicitis was always determined by fever with tenderness at a point $1\frac{1}{2}$ to 2 in. from the anterior spinous process of the ileum on a straight line drawn from that process to the umbilicus. This point can be covered with the tip of the finger and since described by McBurney in 1889 has been known as "McBurney's point". In a few cases McBurney's point will not be sensitive to pressure, or at least it may not prove to be the location of maximum tenderness, especially when an appendix is retroflexed and lies posterior to the cecum, but the vast majority of cases show definite tenderness at the point designated by McBurney.

Rigidity is over the whole right side of the abdomen, possibly accentuated in the lower quadrant. It may appear very early along with the initial pain. Later still, if peritonitis either local or general develops, rigidity may be noticed over the entire abdominal wall. In an ordinary case the more marked rigidity corresponds generally to the neighborhood of the maximum tenderness. The diagnostic importance of rigidity depends upon the care with which it is elicited. Rigidity is diagnostic if present, but its absence does not preclude the possibility of appendicitis.

The symptom of fever is not of great importance in the diagnosis of appendicitis, although some infections of the appendix as a rule show a little rise in temperature, and there is no gauge in the height of temperature. A high fever may occur in the mildest cases. Taking the temperature is a part of the diagnostic hunt and in conjunction with other symptoms is an important guide.

Chills are not common in appendicitis but when they do occur in the beginning usually

presage gangrenous appendicitis, and late in the attack usually signify a postcecal abscess or pyelophlebitis. The increase of pulse rate is proportional to the temperature rise. It should be carefully registered, and an advancing rapidity of the pulse is a serious sign no matter how the accompanying symptoms may behave.

Leukocytosis is of medium grade. In very mild cases, having clinical symptoms barely allowing a diagnosis, there may be no leukocytosis. In very acute attacks the white cell increase is constant, showing an average of 12,000 to 15,000 per cubic millimeter, with an increase in percentage of the polymorphonuclear cells. The blood count is of great value in separating appendicitis from diseases like typhoid fever and influenza, in which there is a leukopenia.

The diagnosis of acute appendicitis is justified, therefore, upon the symptoms as outlined above: a sudden pain in the abdomen soon localizing in the right iliac region; sick stomach and vomiting, tenderness at McBurney's point; rigidity over the right abdominal area; a rise in temperature; leukocytosis. Coming in that order, the conclusion is inescapable. It must be emphasized that local signs are far more important than general manifestations; pain, tenderness and rigidity being more diagnostically dependable than vomiting, fever and leukocytosis.

Approaching a case at the bedside one should allow the patient to tell his own story. He will very likely refer to his pain as a colicky one beginning all over and settling in his right side. He can be directed without asking leading questions, but may not mention nausea unless he be prompted; but will speak of vomiting if it occurs. The suffering of pain may claim his undivided attention at the time; so he may not be accurate in regard to his other symptoms without careful inquiry.

The next procedure would be to ascertain the patient's temperature before disturbing him further. A physical examination is then in order and the abdomen demands prior attention.

Inspection reveals restricted respiratory movement in the abdomen, especially on the

right side, and in the majority of well-marked cases a flexion of the right thigh toward the abdomen. The patient unconsciously draws up his right knee and usually keeps this position.

Palpation is the most essential method of examination both of tenderness and rigidity, as well as the presence of any mass or growth. One should always begin palpating on the left of the abdomen away from the suspected side, working up toward the epigastrium and across to the right iliac region. Deep pressure may be required to elicit tenderness in some instances when the appendix is posterior to the cecum, while superficial tenderness brought out by gentle touch is found if the appendix is distended or associated with a localized peritonitis. In the latter condition, one of the sure signs is production of increased pain upon the rebound following deep pressure with a sudden release of the fingers. The hands of the practiced examiner will be able to distinguish between tenderness on the surface, hyperesthesia of the skin, and that of the abdominal structures themselves. Above all, the touch must be soft or else the object of palpation will be defeated. Going back over the same areas after leaving them for a time will serve to correct any hastily drawn impressions.

Percussion will be useful to show dullness in any area, usually in the right iliac fossa. Auscultation is of limited usefulness as a method and would only give information to the most experienced diagnostician.

Blood determination if possible. Certain special examinations may be done, two of which will be mentioned: examination of the rectum and pelvic examination.

Use of the x-rays with test meals is unnecessary and sometimes harmful in the acute cases, but may be of considerable value in chronic appendicitis.

Many more tests and signs have been worked out by different operators and diagnosticians. Alphabetically arranged, we will simply name them: Aaron's, Bastedo's, Blumberg's, Cope's, Gray's, Gregory's, Horn's, Iliescu's, Meltzer's, Ott's, Rovsing's, Soresi's, Reder's, Wolkowitsch's. These signs are not

universally dependable, yet they may be helpful in diagnosis in vague cases.

Aaron's sign is probably most generally constant and is made by continuous firm pressure with the tips of the 3 first fingers over McBurney's point, giving a feeling of pain or distress in the epigastrium or umbilical region.

Bastedo's sign, inflating the colon with air through a rectal tube or pump, is not particularly popular and does not give sufficient information to warrant the disturbance to the patient.

Blumberg's sign is valuable in proving the presence of active peritonitis. This is produced by firm pressure of the full hand over the inflamed abdomen and suddenly removing the same, producing sharp pains from the muscles of the abdominal wall, due to the sudden change of position of the muscular abdominal wall.

The other signs produced by these different tests are not always present, are only of benefit when they happen to be present, and as a rule the diagnosis can be made without them. Too much manipulation is of no particular value to the patient and if sufficient signs are present to warrant the diagnosis there is no need of continuing the examinations to the discomfort of the patient and the possibility of aggravating the symptoms. The main always present symptoms are the best ones to rely upon and the others need not be used except in very special cases.

Differential diagnosis brings to mind so large a number of diseases that it is well to divide them into 3 classes: those affections which account for pain in the right side, confusing conditions occurring in other parts or organs of the abdomen, and general systemic infections. Under the first heading are classed the conditions which are nearest the appendix: renal colic, pyelitis, Dietl's crises, gall-bladder disease, acute salpingitis. None of these have the 6 progressive symptoms mentioned as diagnostic of acute appendicitis, each having other symptoms not characteristic of appendicitis, and with which this paper cannot deal in detail.

Other conditions encountered in diagnosis are tubal pregnancy, torsion of the pedicle of

an ovarian cyst, acute epididymitis, and dysmenorrhea. All have been confused with the subject under discussion, but I feel sure they have sufficient characteristic symptoms to prevent our going astray in making our diagnosis.

Other abdominal conditions likely to be confused with appendicitis are: perforation of a gastric or duodenal ulcer, acute intestinal obstruction sometimes at or near the ileocecal valve, acute pancreatitis, diverticulitis, peritonitis, thrombosis and embolism of the mesenteric vessels, carcinoma of the cecum, intestinal obstruction by Meckel's diverticulum, spasm of the small intestine, occlusion of the descending colon by adhesions of the omentum, rupture of the right rectus abdominal muscle, acute leukemia, traumatic contusion, unperforated ulcer of the terminal ileum, contracture of the psoas parvus muscle, subcostal neuritis, general systemic conditions like typhoid fever, pneumonia, empyema, malaria, tuberculosis, herpes zoster, gastric crises, lead colic, hysteria and alcoholic poisoning.

It would seem, in mentioning these problems, that they are almost without limit. Everything mentioned has been mistaken for appendicitis at times and undoubtedly some cases of appendicitis have been mistaken for some of these diseases, therefore it is not a surprising matter if some one of us makes an error in diagnosis of any one of these conditions, but the abdominal operations done under proper safeguards are so satisfactory at the present time that whenever there is a doubt about a case of acute abdomen it is better to make an exploratory incision and find the exact cause than to hesitate and trust that nature will restore our patient without an operation. Also, it is very necessary whenever the abdomen is opened and an appendix is removed to try and make sure that some other morbid condition has not been overlooked.

In a large number of cases, running into the thousands, it is found that about 80% of the preoperative diagnoses of acute appendicitis made with confidence are confirmed at operation. In the remaining 20%, where diagnoses are made with some misgivings, about one-half were found correct at operation, and in less than one-half the diag-

nosis was incorrect. So that in all cases of preoperative diagnosis of acute appendicitis less than 10% of the whole prove to be incorrect on the operating table. Either some other lesion was found or none at all to account for the symptoms, but as all the cases needed operation probably no harm was done in any of the negative cases. Therefore, when we are assured that more than one-half of our cases of acute abdomen are due to an acute appendicitis and fully 40% of the remaining acute abdominal cases demand proper operative procedure, it is not wise to delay in opening up the acute abdomen if you can be very sure that it is not due to some general infective disease such as typhoid fever or an infective intestinal disease.

In acute appendicitis, please remember the regular order of the symptoms—abdominal pain, nausea, vomiting, tenderness, fever, leukocytosis. If you have abdominal pain followed by nausea and vomiting and tenderness, do not wait for the other symptoms to develop. Be well satisfied to go ahead with your surgical procedure with full confidence that you have an acute appendicitis.

If you have chills, fever, headache, diarrhea and leukopenia make very sure that typhoid, influenza or allied infection is not the trouble and once more check over the sequence of the symptoms of abdominal pain, nausea and tenderness, before making the operative procedure.

the greatest advantage toward furthering our obligations to each other and to those of our profession outside our hospital?

In order to attempt to evaluate the good that any line of endeavor, such as the mission of a hospital to its community, may have done and to determine rightly what it must do in the future in order to progress, one must know first of all something concerning its history and the many changes and reactions which have occurred during its development. This can be best shown by dividing hospital development into 4 main epochs:

(1) The period preceding Lister, during which practically nothing was known concerning the cause of sepsis, and before the science of bacteriology was born. (2) The days of Lister, Koch and Pasteur, when asepsis was undergoing its practical tests and when bacteria as the cause of disease was applied to almost every human ailment. (3) The era following Lister, Koch and Pasteur, which dates from the second period up to within very recent years. (4) The period into which we are now rapidly passing. It must occur to every careful observer that these are distinct and separate epochs of hospital growth and development. Moreover, that what occurred in the time of Lister, Koch and Pasteur cannot satisfy conditions of today, nor can methods of 1927 meet the needs of 1930 or the more distant future.

In pre-listerian days that individual whose lot it became to have to go to a hospital was indeed unfortunate. Hospital gangrene was the scourge of the medical profession and more people died of infections which occurred in the best regulated hospitals than of those which took place in private homes. Naturally, therefore, only to those for whom it was surgically necessary or who were medically moribund did the idea of going to a hospital make any appeal. Such conditions gave to hospitals in general a rather black name which prevailed throughout this entire period and may in great measure account for the extensive growth and rapid development of bathing places, treatment quays and open air institutions found in the British Isles and throughout continental Europe.

IS THE HOSPITAL STAFF KEEPING PACE WITH A RAPIDLY GROWING HOSPITAL?

A Nonofficial Check Up

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Atlantic City, N. J.

Now that another year is rapidly nearing its close and one naturally turns to retrospection, we ask ourselves, among other questions, whether the hospital through its Major Staff has fulfilled its mission to the community, and has the clinical material been used to

During the aseptie or second period when infections were being accepted as the cause of all disease, surgery, particularly, gained a great impetus, because, as you know, until that time major surgery had not been a success. Therefore, great provision was begun to meet demands along that line. Even during this successful period, however, when surgery was rapidly coming into its own and many wonderful cures were being wrought, there remained many who looked upon the hospital with great fear as being a place to which one did not go of his own volition.

During the third or post-listerian epoch which followed this trying out stage, medicine and surgery made greater advances than during all the previous thousands of years combined. Individuals became less fearful of hospitals. Large tumors were removed and great deformities were corrected till within a short span of years patients had almost to be dissuaded from running into all kinds of surgical procedures as a short cut to health and happiness rather than having to be almost frightened into the necessity of prompt action, as was necessary in former years.

This type of psychology had a profound influence upon community life. Great hospitals of all kinds grew up and at the present time the individual who is ill seeks the hospital, as one would seek a higher court of appeal, as being a place in which he had rather risk his chances of recovery. The fourth epoch is now being ushered in and represents, to my mind, the greatest trial medicine and surgery have been subjected to in modern times.

Some one has said that jazz has not only struck music, but medicine as well. It has divided medical and surgical patients into 2 main groups. (1) Those individuals who have very little wrong with them and who in the past have furnished the greatest percentage of office practice, but who now seek all kinds of jazz treatment, such as chiropractic, osteopathy, physiotherapy, drug store therapy and various baths. (2) Those persons who are profoundly ill and who are struck down before the jazzer can arrive, and those who are neither obviously surgical nor outspokenly medical, but who have some vague

and hidden malady from which they have been unable to free themselves by all known short cut methods. It is obvious, therefore, that within the span of one's own medical life many changes have occurred. Hospitals during recent years not only have to care for the surgically needy and medically moribund, but for those who have a desire to get at the bottom of some disturbance which has failed to respond to simple procedures and therefore impresses them as being of very serious moment. Moreover, such patients seek the hospital because it is becoming better known that greater service is possible in a coöperative hospital or a well regulated clinic.

The Atlantic City Hospital is no longer a local institution whose influence is limited by the confines of our city environment, but it is becoming national, if not international, by reason of the nature of our visiting population. Disease is no respecter of person and whether Asiatic, European, South American or Canadian, he who becomes ill within a radius of 40 miles along the South Jersey coast must of necessity come to the Atlantic City Hospital. As the hospital has grown, the various hotel, all of which were formerly semiprivate sanatoriums, have gradually relinquished their hold on the very sick till now many cases are no longer desired by them but are induced to go to the hospital. These are but natural developments of an advancing age; one does not have to be visionary to anticipate a time when patients will not only come here to convalesce, but will come for careful study because of our hospital facilities (if we make them what they should be), combined with the great advantage of the seashore air.

During the years it has been my pleasure to serve in the Atlantic City Hospital many rapid changes in the types of patients who seek our aid have taken place. Aside from the many acutely ill, whom we always have had and shall always see, many more have sought our help of their own free will; more are sent in by non-staff doctors for careful study, and a larger number of patients leave the wards with greater reluctance than at any previous time. Can this tendency to seek a more thorough diagnosis be further extended

so as to make it well worth while? Don't we owe enough to the community, the interns, nurses and outside doctors to make this phase of the Atlantic City Hospital grow? Interested doctors are potential boosters and no business profits as do concerns in which every one shares some gain. By this I do not mean to imply that we should have an open hospital with every one on the staff. What I wish to see effected is a better use of our clinical material for community purposes.

If the entire medical population of Atlantic County could profit by seeing and hearing our cases discussed in a clinical way, nothing would go further toward promoting a warm fraternal spirit in our community. Moreover, only in this way can the medical men know the high type of work that the hospital is doing.

These are phases of our future work that demand to be met now in our new department that has just opened.

METHOD OF PROCEDURE SUGGESTED

1. Hold a clinic each month in which the chiefs on duty could carefully present cases of interest to members of the staff.

2. Hold a clinic every 3 months which the whole city profession could attend as a closing climax to each medical and surgical service.

3. Hold a clinic once or twice a year, as was so ably done by Dr. Scanlan, in which the invited Atlantic County Medical Society speakers at monthly meetings could act as chiefs and which all could attend.

HAVE WE THE MATERIAL?

It has been my great privilege to have served in hospitals both in this country and abroad. For the size of our hospital, none can offer a greater variety of material as a result of the wide territory from which it comes. We had in the wards on my service practically all the different types of cardiac disease during the same weeks and were thus afforded an unprecedented opportunity for studying differential diagnosis.

(1) We had a case of aortic insufficiency with mitral insufficiency which was well transmitted, cor bovinum, waterhammer pulse, low

diastolic pressure and all the typical earmarks of that combination.

We had the same type of aortic insufficiency with relative mitral insufficiency, with a murmur not well transmitted which showed improvement under treatment showing that it was not organic in nature. We had a typical mitral stenosis with accentuated pulmonic second sound, great fatigue and ashy blue color so characteristic of this disease. We had a loud crescendo presystolic murmur in a patient who did not have an accentuated pulmonic second and who could do normal physical work, thus placing a doubt on the organic nature of the symptoms. We had a case showing both a thoracic and abdominal aneurysm in the same subject. We had a partial heart block due to definite change in the heart muscle which was not influenced by any sort of therapy. We had auricular fibrillation of typical types and, finally, a case of malignant endocarditis which after a few days became a private case.

(2) We had 3 types of jaundice on the ward at once: biliary cirrhosis, as was shown by autopsy; hypertrophic cirrhosis, as was shown by the direct and indirect van den Bergh test and portal stasis; acute catarrhal jaundice which cleared up under our care.

(3) We had 3 types of asthma, apparently typical at first; one due to cardiovascular renal insufficiency, one due to intestinal stasis; and a third, of true asthma, which remained stationary and could only be allayed by hypodermics of adrenalin.

(4) We had 3 types of arthritis: acute rheumatic fever, gonorrhoeal arthritis and infectious arthritis due to bad teeth, all of which improved under appropriate treatment, showing the correct diagnosis.

(5) We had the 4 major typhoid complications at once: typhoid with hemorrhages of the bowels, typhoid with acute nephritis, typhoid with frank pneumonia and typhoid with acute cholecystitis.

(6) We had 3 types of apparent diabetes at the same time: one due to luetic pancreatitis, as proved by its responding to antisiphilitic treatment and not to diet and insulin; one due to focal infection or carbuncle of the neck.

which got better upon removal of cause; and one of true diabetes which could only be controlled by diet and insulin. What a wonderful opportunity for 6 separate clinics the above material would have provided concerning diseases of great importance and in which a differential diagnosis could be made only by careful study.

Therefore, in answer to the above caption one's conclusions, it seems to me, should be that we are not making the greatest use of our clinical material; that very rapid evolutionary changes are taking place in medical and surgical types that become hospital patients, but that we can meet the condition now, first because we have the material, and secondly because those of the profession outside of the hospital staff are sending material to neighboring clinics largely because they are not cognizant of work which the hospital does.

A STUDY OF PERSONALITY

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I have wandered many ways in medical thought that my mind might solve the broad problem of the sick. When I began practicing it was soon made evident to me that the art of medicine had much to do with personality, that every person who was ill had a temperament, and, added to that was the attitude of the relatives and friends. I discovered, also, that to treat the illness which might have afflicted my patient, I was compelled to treat the mental state of the sickroom, and this has been the biggest problem of my life. It is one of adaptation, it comes to all physicians, and the sooner one perceives this factor in practice, the better physician he will be.

TRANSFORMATION

In my first year, I came across an Irish-woman who had a stronger personality than I, who was inclined to tell me what to do rather than to accept what I told her to do. This disturbed me greatly, and I called upon my warm and loyal preceptor to discuss this to-

gether with plans for my future. He suggested that I take 2 prominent and successful doctors of the day, study their characters and personalities and what seemed to be the secret of their successes. This I did. One was gentle, kindly, considerate in his manner, not opinionated, yet believed that what he was doing was the best, and certainly the best he knew. His presence was a benediction and a joy. He practiced medicine as a moral obligation rather than as a financial matter. He seemed to be successful. As to his diagnoses, I had no way of determining their accuracy. The other man was a Princeton graduate, slender in body, more active in mind, perhaps a little keener and more of a student of books; but he had a sharp, quizzical manner, was not gently disposed toward the other members of the profession, felt that all knowledge resided in him and such as did not could only be found outside the city, all his consultants were New York men, and he asked for his fee before he delivered his prescription or did his operation. The first man died honored, respected and beloved. At the funeral of the second, only 1 physician was there and very few friends. I watched both of these men, studied their attributes, successes and failures and to the best of my ability copied such good qualities as I discovered, for a touch of personality is worth far more than all the resources of medicine.

Throughout my life I have noticed just such differences in men and it seems to me that body structure has much to do with what we call the "mind". Anthropologists have shown that the round-faced, round-headed man seldom becomes a leader. He is more apt to look for one. Then we have another type, the long, narrow-faced. These men are our leaders. They have individuality, they think for themselves, and are to be found mostly in the cities. How strange it would have been if Lincoln had been of a short stature! Can it be conceived that his mind and his life would have developed the same? We look to the big-bellied, ponderous man for good nature and cheerfulness, for a good mixer; and are rather inclined to consider the tall, slender and somewhat underweight man retiring and given to self-initiative.

Scientifically, if the gonads are removed from a person who is developing the product will not be a pure sexual type. If the adrenal becomes diseased or there is loss of function as in influenza, there is debility and lassitude, slow mental processes and pacificism. We all know the story of the thyroid; how hyper-functioning makes for nervousness, restlessness, increased metabolism and increased activity; while a hypofunctioning thyroid makes for the reverse, the mind and digestion slows, and all functions of the body, cutaneous and subcutaneous, show inactivity—in short, "old age" coming early. If the leg is amputated at the thigh, the patient becomes fat and jolly. If an arm at the shoulder, he becomes nervous, irascible, and testy. The tuberculous person is known for his optimism; the thyroid patient for hallucinations; the pneumonia patient for acute mania; the intestinal toxicemic for melancholia. So we can but perceive that the mind seems to be correlated with the body and with bodily conditions.

MIND

What is this mind? Where is it situated? Where is the intellect and the will, and the will to will? From the time of Socrates, all things were treated by philosophy, explained and proven by it. The philosophers spun words on threads of inference, but in very recent times, through the coöperation of those who studied the body and its different functions, and particularly through the work of the anthropologists, there has ceased to be a philosophic psychology, and biologic psychology has taken its place.

Some of the ancients felt that the brain was the *organ* of mental expression, though they believed it to be but a pulp whose main function was to secrete fluid for the pituitary. All through history the mind has been connected with the brain, generally in a secondary way. It is difficult to believe that it could all be comprised in the brain substance itself, especially when practically two-thirds of that is given over to sense and motor activity. Crile feels that memory lies in the white substance of the brain, though this is even further speculation.

The books tell us now that we do not know what the mind is any more than we know what electricity is. We simply know some of its functions and attributes. Have we not the right to feel that every tissue in the body has something to do with this "mind"? Should we not in our professional life ever keep before us the fact that in our treatment of the sick their minds and their souls as well as the part affected should be considered? Imhotep, 2000 years before Hippocrates, from the little we can learn of him, was a skilled physician who taught this truth. Hippocrates also preached it, and Plato very distinctly tells us that the duty of the physician is to treat the soul as well as the body. If you will think back in our profession you will find that the successful man was the one who sat by the bedside, became friendly, sociable, and made his anamnesis after meditation. He was the old-time family physician and was successful even though ignorant of much present-day knowledge. Medicine was largely writ before mechanics was introduced.

Not many years ago specialties arose, new methods of diagnosis, instrumentation, x-rays, and the like. Opinions amounting to diagnosis, in a sense, can be obtained from the laboratories. The path of least resistance for the average man, and for all of us when we are not on our guard, is to omit the tiresome detail of anamnesis and to see what the plate reads, see what the report says, and to proceed accordingly. But in doing this we are missing the touch. We do not get close to our patient, to his mental state, to his yearnings, to his soul. We, as a profession, may be losing out and this may be the reason that so many of the cults, quacks and pathies are flourishing. A sick person wants and craves from the family physician that which he is not getting. People do not want diagnosis, they want relief. When they need treatment, all of them being yet cave dwellers, they want something which will satisfy instinctive longings. No man is so intelligent but that when he is sick he feels better if he is taking medicine, even though he knows it is not doing him any good. The best medicine is faith,

faith in one's doctor and respect for the profession.

BODY

From the reptilian brain of the comparative anatomist, the fourth or spinal brain of the embryologist, the medulla oblongata of the descriptive anatomist, the embryo sends out a protrusion of itself, the vagus, which descends into the cavity of the body, the thorax and abdomen. From the same place in the medulla there descend through the cord down and out at the sacral plexus fibers similar to the vagus in potentiality, called the accessory vagus, which is spread to the rest of the intestinal tract and the pelvic organs. The vagi are distributed to the large and small intestines but do not reach the nerve net of the gut except through the neuromuscular tissue, the same as in the heart where they do not go to its muscle tissue but to the nodus venosus, the bundle of His, and the Purkinje fibers. These and the neuromuscular tissue in the intestinal tract are reptilian. In very early life nature developed a tissue of such excellence and of such perfection of function that it has been retained in full and similar duty even in the most highly developed animal; that is the neuromuscular tissue. The sympathetic nervous system fibers pass directly to the nerve net. As in the heart, so in the gut, venous blood is necessary for the activation of the neuromuscular tissue and the nerve net. When operating, it is seen that the intestine is grayish blue and, on being exposed to the air, through the quick evaporation of carbonic acid the blood in the vessels becomes oxygenated, the loop becomes pink, and there will be a paresis of that portion with gassy distension. Carbonic acid is the hormone of the nervous system of the intestinal tract as well as of the neuromuscular tissue of the heart. The histology of the circulation of the gut shows that certain valves are so placed that the venous blood is somewhat retarded in its exit. Again there is a resemblance to the heart in the remarkable rhythmic contraction and relaxation of the entire intestinal tract. Our internal organs are as yet reptilian. Even the large liver has no arterial blood coming to its gland

tissue, and, like the reptile's, where there is destruction there will in time be repair.

The functioning of the intestinal tract is a law unto itself, being independent, fortunately, of the higher brain and its accompanying intellect. Its work is so important that physiologically nature has entirely separated these parts of the body, and made, as it were, 2 distinct animals. The function of the nerve net is so sufficient that for its activity all that is needed is distension associated with carbonic acid in the blood-vessels. The vagus is the nerve for stimulation and the sympathetic for relaxation. In the normal individual there is proper balance between the two and the nerve net is master of the situation. There is no psychology, in the mental sense, but what might be termed a metaphysics. There are many phenomena observed in this region which can be explained on the ground that the nervous system of the intestinal tract has a will of its own.

BODY AND MIND

This short résumé of the intestinal nerve mechanism is very incomplete, but suffices to exhibit its wonderful coördination and cooperation. It is practically separated from external life—an inner man. But here is its misfortune: man, its host, can do sinful acts and greatly disturb it. Developmental defects are also a factor. There are more of the latter here than anywhere else in the body. A development defect means a physiologic one, for in visceroptosis the distress is not due to malposition but to poor nerve tone. This is but an instance. The vagus often stimulates, causing spastic conditions; the sympathetic, tympany.

We may visualize ourselves as a composite body—the biologic inner self, the spiritual or better self, the intellectual by which others know us. The approach to any one part is appreciated by the rest. Any attack on one will be resented by all. The kindly physician sitting by the bedside and soothing the mind and the soul will get a finer response through the entire body. The old-time physician in his gentleness, friendly attitude often would have a more healing power than the

modern doctor. The specialist who tests "this" and rays "that", does not come into contact with the man's inner nature. We are all mystics, we all want friendship, and what is not obtained in one way will be sought in another. If we have no family physician to satisfy this longing, then the prince of mysticism, the quack, will find his place.

The graduate nurse largely makes up the defect, for,

"'Tis the human touch in this world that counts,
The touch of your hand and mine,
Which means far more to the fainting heart
Than shelter and bread and wine;
For shelter is gone when the night is o'er,
And bread lasts only a day,
But the touch of the hand and the sound of the
voice
Sing on in the soul alway."

Spencer Michael Free, M.D.

Case Report

TULEREMIA; A CASE REPORT

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and

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The organism, *Bacillus tularensis*, responsible for this infection was discovered in 1912 by McCoy and Chapin as the etiologic agent of a fatal bacteremia in wild rodents, especially hares and rabbits. That it infected man secondarily was first made known by Francis⁽¹⁾ who called the resultant disease tularemia because of the invasion of the blood stream in the human being.

Until 1926 this infection had been reported as occurring in man in 34 states and, until the present report, no case had ever been found in the state of New Jersey.

Because of this fact, because the occurrence of this case establishes that there is a reservoir of this infection in this state, and because, unless this fact is recognized, cases may be missed, this report is deemed warranted in order that physicians may be on the lookout for further instances of this disease.

As the disease has not heretofore been found in New Jersey a summary of its salient features precedes the report.

Tularemia may be transmitted to man in any of several ways:

(1) By the bite of insects—the horse fly or woodtick.

(2) By the bite of animals which have infected their mouth cavities by eating infected rabbits.

(3) By contamination or self-inoculation.

The latter is the more common avenue of infection and while invasion may thus occur through contamination of the hands or conjunctival sac with portions of the internal organs or body fluids of infected rabbits, flies, or ticks, the most common method of all is through the medium of minute abrasions or skin injuries present or incurred while handling infected rabbits. It is of practical interest to note that cooking renders the flesh of diseased rabbits harmless and no case has ever been recorded from the eating of infected rabbit flesh.

In the human being tularemia may assume one of 4 clinical types⁽²⁾:

(1) Ulceroglandular; the primary lesion being a papule, later an ulcer of the skin, accompanied by enlargement of the regional lymph nodes.

(2) Oculoglandular; the primary lesion being conjunctivitis, with regional glandular enlargement.

(3) Glandular; without a primary lesion but with enlargement of regional lymph nodes.

(4) Typhoidal; without primary lesion and without glandular enlargement.

The essential characteristic of the disease in man is subacuteness approaching chronicity.

The incubation period of the disease varies from 24 hours to 9 days with an average of 3 days, the onset being sudden, often characterized by headache, vomiting, chills, aches and pains, sweating, prostration, and fever.

The disease, and especially the typhoidal form, may easily be overlooked, but the following tetrad is sufficient to suspect the presence of tularemia:

(1) A history of having been fly-bitten or tick-bitten or of having dressed or dissected a wild rabbit.

(2) A primary lesion of the skin in the form of a papule, followed by a persistent ulcer or a primary conjunctivitis often followed by conjunctival ulcers.

(3) Persistent glandular enlargement in the region draining the primary lesion.

(4) Fever of from 2 to 3 weeks' duration.

Once tularemia is suspected, the diagnosis may be confirmed by obtaining a positive agglutination of *Bacillus tularensis* in the first 10 days or 2 weeks and noting a rise in titer upon a second test a few days later or during the third week.

Excision, or even incision, of enlarged glands is inadvisable unless a very evident, soft, thin area is found. An early remission of temperature, when the patient will feel entirely well, is often succeeded by its return. Convalescence may be very prolonged, even into months. A single attack confers immunity.

There is no preventive serum or vaccine available and the treatment is entirely symptomatic.

The diagnosis is suggested by the clinical history and course of events and confirmed by the agglutination test. The blood count shows no significant changes. Smear preparations for pus or drainage secretions are useless as the organisms are recovered from such material only with difficulty. Only the ordinary precautions are required in handling a case.

Case report: P. S., white male, aged 31, a carpenter, was first seen by one of us (G. F. D.) at his home in Wildwood, November 29, 1927. His temperature was 102°, pulse 90, and he complained of general aching and chilliness, the general picture being that of a mild influenza. The second finger of the left hand was bandaged because, the patient stated, he had scratched it or run a splinter into it while at work.

The pulse and temperature were normal the next day but on December 4, when he had been feeling ill for 2 days, the temperature was 104°, pulse 120 and there was pain in the left axilla. On examining the finger at this time a small ulcer was seen about 4-5 mm. in diameter near the base of the nail. The epitrochlear and axillary glands were swollen, tender, and painful.

The following history was now elicited: On November 24 the patient shot and cleaned a rabbit. The lesion on the finger, a small "pimple" containing a drop of pus when opened by the patient, first appeared on November 29. The insignificance of the lesion in comparison with the local and systemic reaction, coupled with the knowledge that several rabbits had been found dead, suggested the diagnosis of tularemia.

The temperature during the second week varied from 102° to 104° gradually falling by lysis in the following week.

The pulse varied from 120-90 in accordance with the temperature.

The local lesion though never large, was more than 3 weeks in healing and the regional glands remained large and tender.

On January 6 the patient was referred to Dr. T. D. Taggart, of Atlantic City, and by him to one of us (R. A. K.) for laboratory examination. Through the courtesy of Dr. E. Francis, U. S. P. H. S., a suspension of *Bacillus tularensis* had been supplied to the laboratories in 1926 in preparation for any exigency and the patient's serum, when tested, agglutinated the organism in 1:640 dilution, the limit of the serum dilutions set up. Dr. Francis also tested the serum and found a positive reaction in a dilution of 1:1280.

The patient at present (Jan. 13) has had a normal pulse and temperature for over a week but the glands are still in statu quo without gross evidence of suppuration.

For the convenience of those interested a list of references is appended.

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4. Verbrycke, J. R.: Tularemia; Report of Fatal Case with Autopsy. *J. A. M. A.*, 1924, 82:20:1577.
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When Prune Meets Prune

Meade—"What happens when an irresistible force meets an immovable body?"

Reade—"The poor prune gives up and marries her."—Hage.

"Mandy, when is the doctor coming back?"

"Deed I don't know, boss. He'll be a long time, I guess. He's gone on one of them eternity cases."—George Washington Ghost.

Dr. Raymond Pearl maintains that brilliant children generally spring from undistinguished parents. When listening to proud parents we ourselves have been struck by this.—Punch.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if:

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

THE FUTURE OF PERIODIC HEALTH EXAMINATIONS

During the past 3 years we have conducted a rather intensive campaign, through the component county medical societies, with a view to interesting members, particularly the "family physician", in the making of health examinations. It would be interesting to know just what are the results of all this labor. We know, of course, that organized medicine, speaking through county, state and national societies, has repeatedly declared that health examination work belongs strictly within the realm of medical practice, that such physical examinations should be made by practicing physicians, and preferably by the family doctor. We have been preaching that doctrine to medical and lay gatherings, alike. But, to what extent has the Society membership responded? We do not mean by "resolutions", but by actively undertaking such work. It is difficult to arrive at any satisfactory answer because there has been no registration and but few announcements of those so engaged.

Approximately 100 members have purchased from this office outfits of examination record cards and form-letter reports, but very few have placed renewal orders and, as the original material covered only 25 patients each, it would seem that very little progress has been made with the project, apparently

only a limited number really engaged in the work, or there proved to be very little demand for such service, or those performing the work are securing their record blanks from some other source. We are inclined to think the first guess is correct. We know there is a considerable demand for these examinations, as we frequently receive requests for information as to where and how they may be secured. We know that at least one large organization is making thousands of such examinations and that a fair percentage of its applicants hail from New Jersey.

We have reason to believe that a considerable number of our members are actually carrying on work of this kind—are making complete, physical, health examinations—and hold themselves out so to do. But the majority of those known to us are not family physicians or general practitioners in the ordinary sense; they are the so-called "internists" or "consultants", or physicians with an inclination toward some special field of practice—such as cardiac or tuberculosis work.

In so far as we can determine from available data, general practitioners have not as yet exhibited any marked interest in caring for this kind of practice; at least it is safe to say that very few of them are prepared or preparing to make complete health examinations. We are reasonably sure that of the general practitioners among our membership,

less than 5% are today sufficiently interested to have started the making of health examinations, or even to have submitted themselves to an examination.

We need scarcely say that there is no obligation upon the family physician to practice this phase of preventive medicine; those who prefer to continue the time-honored practice of attending the sick should feel at liberty to follow their own bent; but, inasmuch as there exists a demand for health examinations, a demand that is steadily growing under the stimulus of the medical profession's public educational program, the family physicians must either take up this new feature of practice or cease to complain if the public patronizes quasi-medical organizations that offer physical examinations; or, possibly determine another alternative.

It seems possible that solution of some of our difficulties may be found in the last suggestion. Assuming that the vast majority of general practitioners are not going to consider this sort of practice worth their while—whether because of disinclination or because it is too small in amount, for each physician, to justify the additional trouble—and acknowledging that proper health examinations can best be made by individuals or groups of physicians who specialize in such work—may it not be well to induce some of our qualified members in each community, city, large town or county-seat, to make a specialty of health examinations? All the practitioners of any such community, who are not themselves making examinations, could then refer applicants to their specialist confrères and thus supply the public demand, support a brother, and keep the work inside the profession. Is the idea worthy of trial?

EXPERT MEDICAL TESTIMONY

In this issue we publish a complete report of the transactions of the February meeting of the Tristate Medical Conference, which body devoted an entire session to the professional problems associated with the presentation of expert testimony in court. For many

years past, and especially whenever a criminal case of national interest has held public attention, the medical profession has been subjected to the imputation of dishonest methods and practices, because of the action of some so-called medical experts. Such charges have not always been fair but it must be admitted that not infrequently they have rested upon a basis of truth. Medicine is not yet an exact science, and honest differences of opinion are not only allowable but praiseworthy. But, exaggerated statements, ridiculous deductions, false reasoning, and clever manipulation of scientific truths or half-truths for the purpose of sustaining a particular cause, whether for plaintiff or defendant, cannot be looked upon with favor. Smarting under the sting of criticism, the profession has recently, in various parts of the country, undertaken to correct and reform conditions. A small committee in our own state society has been studying the question for several years, and endeavoring to secure coöperation of the Bar Association. It is not an easy problem to solve, but a start has been made.

As will be readily surmised by those who have given thought at all to the subject, the medical profession is not alone to blame for the evils complained of in relation to expert testimony. Responsibility for the sad state of affairs in our courts of law today, state and national, rests in very large measure upon the legal profession. In the matter of expert medical testimony it is more often the tricky lawyer than the crooked physician who is to blame for miscarriage of justice or for the shameful proceedings enacted in court.

The paper read before the Tristate Conference by a distinguished member of the New York Bar Association, Mr. Paul Lloyd Stryker, presented every phase of the problem in a clear and succinct manner, and the discussion that followed dealt in no half-hearted way with either the difficulties or the suggested plans for solution. The whole constitutes one of the most important contributions to medical ethics and social economics it has been our privilege to publish, and we heartily commend it for your reading.

KNICKERBOCKER ADJUSTMENT SERVICE COMPANY

In the January number of the Journal, as part of the report of the December meeting of the Atlantic County Medical Society, it was stated that a member "spoke of the unsatisfactory treatment he had received from the Knickerbocker Adjustment Service Company in collecting claims", and that "other members also testified that this Service had not lived up to agreement"; further, it was said that the matter was referred to the Welfare Committee of the State Society for investigation.

The Executive Secretary did not find in the material submitted sufficient justification for troubling the Welfare Committee, and requested a more specific complaint, with detailed information. After consultation with the Secretary of the County Society, he did, however, request the Company to submit any explanation it might wish to make regarding these complaints. Representatives of the Company promptly visited Atlantic City, interviewed the complainants, submitted records, and, apparently, disposed satisfactorily of all the matters under discussion. In so far as we could judge, the difficulty arose mainly through misunderstanding by the members of what they had subscribed to, plus the fact that a goodly percentage of physicians will not keep accurate records and will not answer correspondence. In this instance, bringing together the parties to the dispute effected a ready and satisfactory settlement.

Having published the complaint against this business concern, and the company having absolved itself of blame, we think it only common justice to make this *amend honorable*.

ART EXHIBITS

We deem it fitting to direct your attention to the Annual Exhibition being conducted by the National Academy of Design at the Galleries of the American Fine Arts Society, 215 West 5th Street, New York City, until April 8, 1928. According to press reports this

year's exhibit is quite up to the standard of previous events.

The Second Annual Physician's Art Exhibit has been announced by the New York Physicians' Art Club, to be held at the New York Academy of Medicine during the first 2 weeks of April. The exhibition last year was most creditable to the profession and those who have the opportunity to do so should avail themselves this time of the privilege of viewing their confrères artistic products, outside the field of medicine.

THE LEGISLATURE ADJOURNS

The 1928 session of the General Assembly of New Jersey adjourned March 28 and again it is a pleasure to report that all of the adverse medical legislation was defeated. The usual large number of Bills was introduced and among them some of our old familiars, but these latter made little progress this year. The proposition to make a "profession" of "cosmetology", to construct a special Board of Examiners, define a course of special study, and to confer upon the elect special license to practice the art of beautifying humanity, did pass the House of Assembly but it got no further in the Senate than the Committee on Public Health. Likewise the attempt to make, by legislative edict, a chiropractor out of one unfortunate blind citizen of the state, received a complimentary sympathetic vote in the House at an hour too late to run the Senate race. The Osteopathic Bill, designed to convert licensed osteopaths into full fledged practitioners of medicine came to a vote and was decisively beaten.

On the whole, this session of the state's legislative body gave us less trouble than any of recent years, and the public welfare, as regards health matters, was at no time seriously menaced. Our representatives seem to be giving more serious thought to disposition of the foolish projects that are submitted for their consideration and to be less influenced by the specious arguments that accompany such propositions as that to legalize "naturopathy" and similar strange cults.

Medical Ethics

THIS CHANGING WORLD

John Hammond Bradshaw, M.D., F.A.C.S.,
Orange, N. J.

As the beginnings of things can never be known, just so their termination is pure speculation. One thing is constantly impressed upon our minds, and that is that we ourselves and our environment are ever changing. Not only do material things change, but ideas and standards of view-point and of living, and some standards of right and wrong, as years go on suffer alteration.

We say to ourselves—where will all this lead to, and where shall we bring up? We do not know. We must be content, for we know that stagnation means stoppage of progress and even death itself.

He is wise who adjusts himself, and whose faculties of orientation are still intact, and who sees and accepts *facts*. Many are too stupid to see the morality of progress and the righteousness of change. It makes little difference whether we think ourselves more intellectual and more moral than men of past ages. Keen minds have denied even this! But no one will deny that our view-point and our standards change.

One would naturally think that intelligence would be cumulative. Why should not a highly intellectual father or mother have a still more intellectual offspring? And how seldom does this occur! We are forced to admit that *genius is not cumulative* and that heredity follows the law of recession to mediocrity. If this were not the law, our supermen would at the finality of things be top-heavy.

Great men in medicine and surgery have ever been like all other great men in all branches of human activity, science, art, invention, and even mechanics, those who develop new methods by original thought, untrammelled by established authority (and, I almost said, by heredity) and substitute for it independent observation, experiment and deduction.

Our changing world brings on its tide changes in the position, relation and status of the sexes. Why not? It is not necessary today to argue about the single and the double standard. Neither do we hold our breath or look askance, as of yore,

"When matrons seized with oratoric pangs
Give happy birth to masculine harangues."

Ignore it as we may, change is inevitable. Some years ago, one, Tom Paine, used this opening sentence in a celebrated book: "These are the times that try the souls of men." If this was so almost a century ago, how about today?

But there are some things that, like the law of gravity, do not change. Like unto this law where all material things seek a *lower* level, there is another law, just as true, that compels the spirit to soar to higher things. This higher law is just as compelling as the law discovered by Sir Isaac Newton, and this is the redeeming force in our changing world. With this endowment, poor human nature can suffer the "slings and arrows of outrageous fortune". We know that things and religions change, *religion* never.

Medical Economics

PRIVATE PRACTICE AND PREVENTIVE MEDICINE

[Abstract from an Address to the Derby (England) Medical Society, by Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P., London, published in *The Lancet*, October 30, 1926.]

It is not my purpose to mention more than incidentally the official relationship between practitioners in public health and private practitioners. I choose as my more useful task those aspects of the practice of medicine affecting both classes of practitioners, in which active continuous individual collaboration is needed to secure the further advances in national health well within our reach. If in the course of my remarks I appear occasionally didactic, I may claim at least the advantage of experience during 7 years in hospital and private work, and during the remainder of a long public health career in organizing measures necessitating intimate and almost daily contact with the private practitioner.

Of course, the chief work of the private practitioner is, and for long must continue to be, the guidance of the sick person toward recovery, or the alleviation of his increasing sickness. Except to the callous or the indifferent there must in such work always be a recurrent note of sadness which cannot be escaped; and I know no means for relieving and softening this note more efficacious than the belief that such work—discharged without the hurry which is fatal to efficiency, and carried out with all available scientific aid—not only dim-

inishes the burden of suffering, but also is itself an important means of prevention of disease.

This belief in the wider individual and social importance of private medical work is not a modern conception, though it could not become effective on a considerable scale until medicine became in large measure a branch of exact biologic science. There could be no such ideal so long as disease was regarded as a divine or satanic infliction, or as inevitably influenced by the planets. Nor so long as medicine was victimized by doctrines and dogmas, evolved from philosophic hypotheses which were not the final product of carefully checked induction from homogeneous facts, could rational efforts to prevent disease be initiated. The instance, in 1853, of an influential petition by a religious body to a Prime Minister of Great Britain to arrange for a national fast on royal authority to prevent the invasion of Asiatic cholera is well known; and it reminds us how recent is our escape from the view that epidemics are a divine visitation, a view as fatal to medical progress as the doctrines which led some doctors to bleed all their patients, and other doctors to give them enormous doses of alcohol.

The history of preventive medicine, and especially of Listerism, is rich in instances in which, as in the outstanding examples to which I have alluded, life has been prolonged and saved, and disease has been reduced by the accurate, painstaking, and intelligent study of clinical medicine. If I were to mention one chief obstacle to many more triumphs of clinical medicine over disease, it would be that so many practitioners appear to have too many patients, or to be otherwise too busy to be able systematically to think out each case after devoting adequate time to its study, having utilized every available means of diagnosis, whether by consultants or otherwise. When I remember the scandalous way in which at dispensaries and hospitals out-patients were formerly "disposed of", sometimes at the rate of 2 or 3 minutes for each patient, I realize that much improvement has occurred; and it is satisfactory to note that even busy practitioners when imbued with a sense of their scientific and moral responsibility find time for more careful work, which is among the most valuable of all contributions to preventive medicine in the present day.

But having claimed for clinical medicine and surgery some of the greatest triumphs in preventive medicine, I must now pass on to consider some examples of still existent evils, which need not continue, if all medical prac-

tioners "pulled their whole weight", and if they had the steady coöperation both of patients and of public health authorities. My illustrations will be taken from 3 special branches of medical public health work, with the genesis and development of which I have been associated. I refer to the special services of maternity and child hygiene, of tuberculosis, and of venereal diseases. In each of these, although public health authorities are concerned chiefly in the prevention of disease, it is impracticable to draw lines of demarcation between treatment and prevention, and there must be secured, if success is to be complete, whole-hearted collaboration between the official and the private practice of medicine.

THE PRIVATE PRACTITIONER AND THE PREVENTION OF TUBERCULOSIS

Here I can only allude briefly to some of the obstacles to more rapid progress. Experience on all sides shows that in a large proportion of the total cases of pulmonary tuberculosis treatment is belated and unsatisfactory. The reasons for this are well known. There is first the unwillingness of patients to come for treatment at an early stage, and much educational work is needed—as in the case of cancer—to secure a general recognition of this point. But it must be agreed that a large number of practitioners—happily a decreasing number—appear to fail to examine their patients carefully, and may continue for weeks or even months treating them for winter cough, for influenza, or for other vague conditions, when an accurate diagnosis might have been made much earlier either by the practitioner himself, or by him in consultation with the bacteriologist (by examination of sputum), or with the tuberculosis officer whose gratuitous services are available in every area throughout Great Britain for this purpose. Not only so, but in special cases the help of the x-ray photograph is now commonly accessible at the public expense.

We all have to admit our need for help from brother practitioners who have skill in a special department of medicine. The appreciation of this need and action upon it does not diminish the importance of the general practitioner, who in the interest of his patient is the assessor and executor of the special knowledge which the expert contributes as a guide in the treatment of the patient.

In no disease more than in tuberculosis is the hygienic work of the private practitioner more important. Is this fact universally appreciated? Do we lay adequate stress on the importance of teaching the patient to cough

with his mouth screened, as well as on suitable disposal of sputum? Do we impress upon the patient, and do we adequately realize ourselves, that 14 to 15% of the total deaths registered from tuberculosis occur at ages under 15 years; that juvenile tuberculosis is concerned also in many deaths registered, for instance, as bronchopneumonia; and that it is highly probable that infection of human origin in childhood bears a large share in producing adult mortality from pulmonary tuberculosis? Above all, do we realize that this mortality in childhood and youth as well as in adult life results not merely from circumstances of life favoring effective infection, but is due to repeated and excessive doses of infective material received from adults, who are in our professional charge and to whom we may not even have revealed the nature of their disease? There can be no reasonable doubt that if a simple hygienic code of conduct were rigidly followed by every consumptive patient a much more rapid decline of tuberculosis, especially among children, would follow. For the partial character of the success already secured, not only the medical attendant, but also public health authorities who are slack in their administrative and educational work against tuberculosis, and patients and their relatives who fail to adopt the—often inadequately impressed—precautionary measures which are needed must share the heavy burden of responsibility.

THE PRIVATE PRACTITIONER AND VENEREAL DISEASE

The case of a patient suffering from a venereal disease furnishes an even more striking example of the intimate interlocking of public and private interests. Appreciative testimony should always be given to the public-spirited attitude of the medical profession in welcoming in 1916 the organization of clinics for the treatment of venereal disease in every county and borough at the public expense, and without limitation as to the financial resources of the patient. A remarkable decline of deaths from venereal diseases as compared with pre-war years has been associated with these efforts and with the allied work in which private practitioners and public health and military authorities have coöperated. Great progress has been secured; but these diseases continue to be a serious scourge of humanity, one of the chief causes of premature mortality, one of the largest feeders of our lunatic asylums, and a terrible cause of suffering to innocent women and children.

How can we hasten the diminution of these

diseases? If doctors are willing and ready to urge upon each mother and father coming within the scope of their practice the value to health of the training of children's characters on sound psychologic lines; and if, with their special knowledge of physiology and pathology, they are prepared to advocate sexual continence, and chastity in the unmarried, and not to permit or even silently sanction the assumption that these are not to be expected from the normal man or woman to whom matrimony is impracticable, then great further progress can be made. The difficulty is that many doctors are not convinced on these points; and that especially we often fail to recognize the social aspect of religion which demands the subordination, in matters affecting the communal welfare, of the personal to the communal interest. Is it not the duty of the doctor as much as of the religious leader or the parent to live up to this ideal? But apart from the supremely important ethical aspect of the venereal problem, there is serious neglect of large branches of preventive work for venereal disease, which are medical in character. May we not profitably consider these sins of omission from the standpoint of private practice?

A not inconsiderable proportion of premature births and of still-births are due to syphilitic infection of the fetus. The medical officer of health receiving returns as to still-births finds action beset with difficulties, which if initiated by the family doctor would become easy. In what proportion of cases in which there is reasonable suspicion does the doctor arrange for an examination of the mother's blood, or for examination of fetal tissues for evidence of syphilis? This examination can be obtained gratuitously. And if this is not done, is he not open to the accusation of possible neglect of the vital welfare of the patients entrusted to him in the conditions of private practice? In asking these questions I fully appreciate the difficulties in doing what is suggested, the obstruction of patients to undue "fussiness", and the courage implied in suggesting the need for such examinations. But are not difficulties meant to be overcome, and can we, or ought we, to have an unapproachable conscience, until or unless we have attempted in every instance to fulfil these duties?

Similar questions arise as regards the medical history and condition of the rest of the family when a husband is under our care for syphilis. Inquiry may show the need for examining these, and are we then justified in refraining from pressing for this to be done?

The position teems with difficulty, and my only desire in asking the preceding questions, which might be expanded did time permit, is to assist toward the more rapid development, in any doctor in whom it may be lacking, of the sense of inherent communal responsibility which is implied in the privilege of family medical practice. In the case of tuberculosis the need for frank medical consultations has been emphasized. This need is even greater for the treatment of both syphilis and gonorrhoea, in which very specialized treatment is demanded. The family doctor to justify his continuing to treat these patients until free from infection must be in a position to treat at least as satisfactorily as the medical officer of a venereal disease clinic.

THE FAMILY DOCTOR AND MATERNAL CARE

It is not sufficiently appreciated that in the ordinary circumstances of general practice the family doctor is as intimately concerned with the physiologic as with the pathologic side of life. He is the adviser in the physiologic process of pregnancy and parturition and of lactation, including the factors making for mental contentment; he is the trusted counsellor as regards development of the infant and child; and we may reasonably hope that as his knowledge and competence grow, and as public intelligence increases, he will gain his right position as the guide and counsellor of adults in regard to occupational dangers and to habits of life, especially as to right feeding and drinking.

The best method of attendance in parturition is secured when the doctor has made it a condition of this attendance that the mother shall have adequate prenatal supervision and care. In fact such medical care is more important than the presence of a doctor at the uncomplicated confinement. At the present time probably 9 out of 10 mothers do not receive such pre-parturient care. And yet we know that it is important for many reasons. The first is physiologic. The subsequent health of her infant is dependent above all on efficient motherhood; and this depends on the mother's health, including the factors making for avoidance of maternal anxiety, care of her teeth, and a dietary which contains antiscorbutic and antirachitic foods in adequate amount. The early diagnosis and treatment of syphilis and of albuminuria are called for; and the ascertainment of pelvic measurements enables the obstetrician to anticipate complicated parturition and take action as needed.

Should not every medical practitioner be prepared to adopt the rule, demanded by medi-

cine and ethics alike, that apart from emergencies he will only act as accoucheur in cases in which antenatal supervision has been secured? The physiologic work on behalf of the mother finds its normal sequel in that affecting the infant. Most of us as practicing doctors have relatively few personal opportunities for watching the progress of healthy infants, and this is a handicap in medical work for sick infants. But our knowledge has vastly increased, and has become widely available, through health visitors and others, for mothers everywhere; and the application of this knowledge has borne an important part in the halving of the rate of infant mortality since the present century began. This is especially true as regards the problems of nutrition and the more general problems of efficient motherhood. In this fundamental branch of medicine we are now in a position to become to an extent, never before practicable, *doctors*—i. e., teachers of preventive medicine—and thus raise the general standard of maternal and child health.

HOW THE DIPHTHERIA MORTALITY RATE MIGHT BE IMPROVED

I am tempted to give one further illustration of our partial failure to secure the saving of life and the prevention of illness which is well within our reach. Consider the present mortality from diphtheria. In 1925 typhoid fever caused 776 deaths in England and Wales, diphtheria 2774 deaths. The first of these diseases we know is rapidly and steadily declining as the result of improved sanitation and sanitary administration; the second we know—judging by past history—will in a few years cause twice or three times the large number of deaths attributed to it last year. In the past typhoid fever also showed epidemic peaks and troughs in a succession of years. Human effort has almost wiped them out; and we know that human effort can do the same for diphtheria. True, infectious material of respiratory origin is more difficult to inhibit than infectious material discharged from the alimentary canal; but quite apart from such control it is well within the power of medical practitioners, given intelligent aid by parents, almost entirely to prevent death by diphtheria. (The occasional occurrence of cases of "lightning" virulence forms only a rare exception to this forecast.) That this is not being done is a grave reflection upon the medical profession and upon the parents of the children whose lives are sacrificed to ignorance and negligence. I am not referring solely to the demonstrated possibilities of im-

munization of children against diphtheria. Even apart from such immunization diphtheria within the next 5 years might be reduced to the level of typhoid fever as a cause of death. This could be done by the prompt administration of diphtheria antitoxin on the first suspicion of diphtheria. Antitoxin is supplied free by local authorities; how seldom is it used by practitioners before the belated admission of their patients to hospital! The failure to do this is due in part to the fatal practice of suspending diagnosis—and even worse, of suspending treatment—until the result of examination of a swab for Klebs-Löffler bacilli has been ascertained. So much is this the case that it may even be debated whether the routine submission of swabs to examination has not caused more deaths than it has prevented.

An important contributory cause of failure to administer antitoxin promptly is the lack of courage shown by the doctor in not acting on suspicion. He may be accused of mistake, if after giving antitoxin a swab is returned as negative. But his explanation to the parents should remove this difficulty; and even if not, can the feared but usually avoidable loss of prestige of the doctor be placed in the balance against the immense saving of child-life which would be secured if the doctor always systematically administered antitoxin when he first suspected diphtheria?

THE FAMILY DOCTOR AS PUBLIC HEALTH OFFICER

But my intention in this address is not to describe special methods by which the growing and urgent needs of efficient medical practice can be met, but only to indicate the general principles which emerge. I have said enough, I trust, to make it clear that the progress of the application of preventive medicine depends predominantly on the attitude of the medical profession. It has even been said that doctors constitute a chief obstacle to this progress; but this can only be true in those instances in each community in which there is, for instance, failure to use every available means for prompt diagnosis and for adequate treatment of, say, tuberculosis and syphilis; when the duty of prenatal care for every expectant mother whose name is on a doctor's list has not been realized; and when, for instance again, the doctor fails to fulfil his duty as doctor or teacher, in respect of the prevention of rickets, the avoidance of unhygienic habits, and especially in regard to the consumption of alcoholic drinks. In view of the habit-forming risks involved, the doctor who flippantly and without serious reason pre-

scribes alcoholic drinks for an ailing patient is definitely open to the accusation of antisocial action.

In making the preceding remarks, I have claimed the position of family practitioner as well as of public health officer. As practitioners of both these branches of medicine we can claim that we belong to a noble profession, a calling which, in present circumstances, makes it possible for us to influence the ethical as well as the physical course of a multitude of lives. Indeed, if our common work is to be ideally successful, we must increasingly realize that where preventive medicine has hitherto failed—apart from imperfect knowledge—is in regard to those disease in which character and conduct are concerned. In his intimate relation with the family advised by him who, so much as doctor, can influence the people to attain to such conduct in life as will improve personal health, and at the same time safeguard the health of others.

In Lighter Vein

Giant Wanted

An Eastern movie magnate visited his studio, where one of the companies was making a picture dealing with France during the last days of the Revolution.

He spied the actor impersonating General Bonaparte—for the sequence being filmed had to do with the suppression of the mobs in Paris by the future Emperor.

"Who's the guy?" asked the film magnate, pointing to the actor.

"Why, that's Napoleon!" explained the director.

"Why did you get such a little man to play such an important part?" demanded the magnate.

—New York Evening World.

Considerate Soul

He was working on a high building, when he fell. In falling, he managed to grasp a telegraph wire.

"Hold on!" yelled his mates, and ran for a mattress. But he let go.

On his recovery he was asked why he didn't hold on.

"Well," he said, "I was afraid the wire would break!"—Yorkshire Post.

Henry and Sylvia were out driving. Henry had one arm around Sylvia, when the car hit a bump and skidded.

"Oh, Henry," gasped Sylvia, "use two hands."

"Can't," says Henry, grimly. "Gotta drive with one!"—Navy Log.

"How did your wife know you attended that poker game the other night?"

"Oh, I came home with a chip on my shoulder."—Arizona Kittykat.

Observations from the Lighthouse

CONSIDERATION OF HIGH BLOOD-PRESSURE DUE TO SMALL LUNGS

From a roentgenologic study of 100 patients, Lintz (International Clinics, Dec., 1927) draws the following conclusions:

1. Hypertension is responsible for more deaths than tuberculosis and cancer combined.
2. Heredity is the most important known factor.
3. Hypertension is due to a spasm of the antero-capillary bed, produced by the vasomotor center in the medulla.
4. Death is caused, in order of frequency, by heart failure, Cerebral hemorrhage, arteriosclerosis and nephritis
5. Blood transfusions lower blood-pressure.
6. Polycythemia frequency exists without hypertension.
7. Sodium chloride is not a factor in hypertension.
8. Hypertension belongs to the allergic group of diseases.
9. Hypertension cases stand operations well, hypotension cases poorly.
10. Psychic and actual pain raise blood-pressure decidedly in hypertension cases, but only negligibly in normal cases.
11. Stable blood-pressure has few symptoms, labile blood-pressure has many symptoms.
12. Variations and long remissions frequently occur in hypertension.
13. Prognosis of a case may be made from study of a hypertensive relative.
14. Absence of axillary hair is a frequent finding in hypertension, especially in women.
15. The endocrine glands have an important bearing on hypertension.
16. Hemorrhage in the brain lowers blood-pressure.
17. Retinal hemorrhages prognosticate cerebral hemorrhage.
18. The diastolic pressure is more important than the systolic.
19. Hypertension does not contra-indicate the use of digitalis.
20. Valvular lesions are not responsible for hypertension.
21. Dropping blood-pressure in old age means cardiac weakness.
22. Spasms of the renal vessels, arteriosclerosis leading to renal damage is the true sequence in essential hypertension.
23. Hypertension exists more often in the young than is usually believed.
24. High altitude lowers blood-pressure, low altitude raises it.
25. Alcohol lowers blood-pressure.
26. Smoking is injurious in hypertension.
27. Syphilis is no factor in hypertension.
28. The height of blood-pressure alone is no criterion as to the severity of the disease.
29. Calcium iodide in sixty-grain doses t.i.d. p.c. was found beneficial in asthma and in hypertension.

Lintz draws attention to the fact that in very many patients with essential hypertension, especially in females, he has found the lungs smaller than usual. Whether the lungs are the result or cause of the hypertension it is impossible to say. Increased weight is common in hypertension. The author wonders if the small lungs may be at least partly accounted for by the high diaphragm resulting from the increased abdominal fat. Does the improvement in many cases following reduction in weight lie in the improvement of diaphragmatic respiration and consequently more efficient oxygenation? To the neuropathic, endocrinopathic and basopathic inferiority of the essential hypertension subject Lintz adds also this pulmopathic inferiority.

SOME REMARKS ON STETHOSCOPY

H. I. Bing (International Clinics, December, 1927) emphasizes the fact that when pneumonia is complicated by pleuritis the diseased side arches somewhat outward and the intercostal furrow is eliminated. As the pleuritis is absorbed the side falls in.

By marking the boundary of the heart, that is the total heart dulness, by percussion, you may be able day by day to follow how under correct treatment a dilatation to the right shrinks to normal, that is, reaches a little outside the right edge of the sternum.

In all cases where there are not very marked changes in the lungs, the patient should be examined in the sitting posture.

Bing emphasizes the fact that even by fairly slight percussion the whole lung may be set in motion.

The percussion beat is spread especially in the direction in which one makes the percussion. The recognition of this principle is of special value when using slight percussion.

The strength of the percussion beat is also of importance. By quite slight percussion only those waves lying nearest the direction wave are perceived, while the waves radiating out to the other sides and not hitting the heart do not reach at all to the perception. The direction wave is dulled by striking the heart. The pressure of the plessimeter finger is also of importance.

Supposing that the integuments covering the lung gradually become thicker to the right, one will at slight percussion in this direction by and by get a more dull sound, because the force of the beat will to a greater and greater degree be swallowed up by the integuments.

The authors describes the situation of the lungs relative to the surface. The plessimeter finger must be placed in as exact a position as possible, by placing the pulp of the hyper-extended third finger in the place that is to be examined, and then striking on the basal part of the third phalanx.

It is important always to hit the same place on the finger.

Generally a dulness due to swelling of a bronchial gland can only be pointed out on the right side where the bronchial glands are found in greater numbers and where they lie higher up than on the left side. If one fixes Krönig's borders and makes use of the breadth of the isthmus as a means of estimating whether there is in-

filtration of the apex, one may be led to a wrong result.

PNEUMORADIOGRAPHY OF THE KIDNEY

Schilling (International Clinics, Dec., 1927) describes Rosenstein's technic for pneumo-radiography of the kidney as follows:

"The patient is placed in the kidney position. Just below the twelfth rib and at the outer edge of the lumbar muscles there is inserted an ordinary record-needle to the depth of 4-6 cm., according to the thickness of the covering in a direction posterior anteriorly, with a slight direction upwards and medially." The position of the twelfth rib may be determined by x-rays. The point of the needle should be in the fat-capsule. There should be no bleeding nor should the needle make too large respiratory excursions. In the latter case the point of the needle is probably in the kidney.

Oxygen is injected by means of a 100-cm. syringe with an easy running piston. Resistance should be trifling. From 400 to 600 c.c. of oxygen are injected, whereupon there appears a marked tympanism in the lumbar region, and there should be no pain.

After the injection the patient is placed in the sitting position in order that the gas may rise around the upper end and the organs be photographed immediately afterward.

By turning the patient in front of the screen the kidney can be viewed from various sides. Its form, size and situation are distinctly visible. Pneumo-radiography entails little risk. Some few cases of temporary embolism have been reported.

Inflammatory renal conditions, pyonephrosis and tuberculosis constitute contra-indications as in these diseases there might be danger of perforation.

Cases in which this method may be employed to advantage include:

1. Renal tumors.
2. Where it is desired to ascertain the relation of the kidney to another tumor.
3. Kidney dystopia.
4. Stone appears more clearly than in an ordinary film or in pyelography.
5. Adhesions.
6. The suprarenal gland is often clearly shown.

Demonstrations of pneumo-radiograms in different conditions are given.

Communications

WHY A WOMAN'S AUXILIARY

In the process of organizing auxiliaries to the county medical societies, and in the course of return visits to counties where such organizations have been set up, as well as upon occasions where we were asking local medical societies to authorize the formation of such auxiliary bodies, we have frequently answered the question stated above. There has been no argument against the construction of auxiliaries but there has been considerable scepticism as to the need for and some doubt as to the possible value of

such an additional organization. Furthermore, because it requires time to evolve a working organization and to get all the machinery going smoothly, some of the newly formed auxiliaries have not, themselves, found out how best to justify their existence.

The luke-warmness of some of our members toward the project, the failure in some districts to accord the women that degree of encouragement and support which we felt they had a right to expect, and the desire to ascertain whether we had been correct in believing there is a field of great usefulness for a woman's auxiliary to each county medical society led us to seek an unbiased opinion from some one who should look at the problem anew.

In consequence, we asked our associate, Mrs. Taneyhill, who was visiting some of the auxiliaries and addressing women's clubs where auxiliary members had secured her engagements, to give some thought to this problem. The following letter from her is of interest:

"As your associate in the educational work of the Medical Society of New Jersey, I have had the privilege, during the last few months, of meeting with 13 of the Woman's Auxiliaries. In retrospect, these pleasurable occasions have crystallized into several definite impressions that may be of interest to you as bearing on that vexed question, Why an auxiliary?

First, in answer, I would place *their inherent potential value to the medical profession and to the community*. For anyone prepared to give the matter fair consideration, that claim should not require much argument by way of proof. It stands to reason that men who have elected, and attained to the practice of, such a highly intellectual profession will choose for wives women above average mentality. The contact I have had with the members of the auxiliaries has certainly borne out this assumption. It also stands to reason that women, being biologically help-mates, will give natural and enthusiastic support to any measure that promises to further their husbands' interests. In addition to that element, the maternal instinct in woman always stands ready to express itself in altruistic enterprises. These two characteristics, then, endow her with potential value to the profession and the community, but only *individually* and for the most part unconsciously.

If the claims made for the wives of physicians may be duplicated in fair measure for mothers, sisters and daughters of physicians, you have in the state of New Jersey a conservative average of two intelligent women interested in the work of each of 2400 physicians—quite a little reservoir of untapped energy, and hitherto an unlisted asset in public health holdings.

That individually these women remain negligible and that only through organization may they become a definite asset, surely nobody in this day and generation will deny. What is being questioned by the county medical societies, by individual physicians, and by some of the women themselves is the proof that such organization will be an asset. This proof I believe the infant auxiliaries have already in a measure supplied or indicated by the fact that through organization they have acquired a certain professional consciousness which has rendered them alert to help create and maintain the standards of preventive and curative medicine which as individuals they would despair of even attempting. To be concrete (and necessarily personal):

I have spoken to date to audiences approximating a total of 2700 persons, on subjects of periodic health examination and diphtheria immunization. I am employed by the state medical society to do this educational work but I have met more than one member of that society who did not know of my existence, and I have received through the members of that society less than 5% of the opportunities which have been afforded me to present this message of theirs. That means that 2000 physicians are so engrossed with actual patients that they pay little attention to the attitude of the well members of the community toward them or their profession. Perhaps it is true that the busy physician has little opportunity for contact with the well members of society, but his women folk do have many points of close contact. And yet how many women are going to interest themselves in furthering the program of an organization to which they do not belong or to which they have not some form of attachment?

With a medical educational campaign as one of the definite objectives of the auxiliaries, however, the numerous individual contacts are converted by organized pressure into a limitless field for dissemination of a rational attitude toward the science of medicine and the preservation of health. With the exception of the small proportion cited, the educational program of the society, in so far as the work of the assistant secretary is concerned, has been carried on by the auxiliaries, and, although we have made a creditable record for new work, only the surface has been scratched. I could not in this letter discuss the tremendous possibilities of a medical educational program, but I do want to mention what I consider the most important and far reaching item—that of schools. In many instances auxiliary members are also on the local school boards, but apparently they have never before connected the eager, receptive audiences of the school assembly, and the intelligent units of the Parent Teacher Associations with the furtherance of that science to which their husbands are giving their lives. And this seems the moment to ask what physician, who has the physical welfare of humanity at heart could say that he does not desire such coöperation, or that the woman he has chosen to be his wife should not or could not logically furnish it?

The second answer to the question, why an auxiliary, lies in *the possible value of such an organization to the members themselves*. I mean by this the acquiring of such elementary and correct general knowledge of medical subjects as they have not the time to gather individually and which their husbands certainly have not time to impart. I have been repeatedly impressed by the fact that every woman who runs a doctor's house seems to feel snowed under by the telephone, and in many cases her sum total of professional knowledge is where he is to be found at the particular moment of the call or when he will be in his office. That the wife of a physician occupies a place of relative importance in every community will be generally conceded, I believe. That she may be a potent factor in molding public sentiment concerning medical matters would seem to be a natural corollary to that fact, and it would follow that her coöperative value would be in proportion to her information regarding the issues at stake. Surely every wife, mother, daughter or sister of a physician is capable of assimilating the facts per-

taining to the need for legislation respecting the inoculation of dogs against rabies; surely such women should be able to give the cold unanswerable facts about vaccination, diphtheria immunization, typhoid inoculation and kindred subjects, when some highly misinformed sister delivers herself of unctuous error at the card club or tea party. To be convincing, however, one must be accurate, and accuracy is not acquired haphazard.

Is there, then, anyone who would deny that the auxiliary can accomplish much as a study club? With accessories if you wish—cards, music, tea, dancing, anything that the group finds congenial, but all incidental to 30 or 45 minutes consideration of some subject pertaining to the gospel of health, and yielding an increasing fund of information which can be passed on to the laity at opportune moments.

It seems to me that these are two good strong legs for the young auxiliaries to stand on—dissemination of an educational program, and study of the inexhaustible material which concerns the physical well-being of one's self and one's neighbor.

And maybe you can read between the lines when I say, apparently apropos of nothing at all, that the regular army had little use for the reserve forces in time of peace, but when there was a cause to be won, where would that army have been without the reserves?"

HONORED FOR SERVICE TO CERTIFIED MILK

Doctor Floy McEwen, of Newark, long time Secretary of the Essex County Medical Milk Commission and active in the interests of the Commission, though recently unable from physical disabilities to get out, has received signal honor from the Essex County Medical Society, which has taken the following action:

"Among important factors in modern preventive medicine and public hygiene, Certified Milk has an outstanding place. As the standard by which all milk is measured and recognized among other civilized peoples, it is fitting that Essex County should be remembered as the cradle where it was born. The burden of maintenance of organization as the means for maintaining honored reputation for high standards has, since Dr. Coit's death, fallen mainly upon one of our members, whose toil for and devotion to the cause has been most unselfish. Our Constitution provides that 'practitioners of medicine of this or other States and members of this Society, who for a long series of years have faithfully served it and whose age or infirmities prevent their regular attendance upon the meetings of the Society, may be elected as Honorary Members'. Therefore, it is hereby voted that Dr. McEwen be elected an Honorary Member without County Society dues, all rights and privileges of regular membership in both County and State Societies being retained, his name to continue on the list of regular members and the Treasurer of the Essex County Medical Society be empowered to pay any dues to the Medical Society of New Jersey."

Frank W. Pinneo, M.D..

Secretary.

SPECIAL CANCER STUDY COURSE

At the request of the Pennsylvania State Commission on Cancer, the Philadelphia County Medical Society, through its Committee on Cancer Control, is arranging a special intensive course for the study of Cancer, on May 22, 23 and 24, for all physicians who are interested. Sessions are to be held morning, afternoon and evening.

The mornings are to be devoted to special clinical demonstrations upon Diagnosis, Treatment and Results, in the centrally located teaching hospitals of Philadelphia.

A special free buffet luncheon is to be served to the physicians who register for this course, so as to conserve time and prevent scattering.

Details of the program will be published in the near future.

The registration fee will be \$5.00.

Please register at once with Franklin M. Crispin, Executive Secretary, Philadelphia County Medical Society, S. E. Corner 21 and Spruce Streets, Philadelphia, so that satisfactory arrangements may be made.

REPORT ON TUBERCULOSIS—EARLY DIAGNOSIS IS CAMPAIGN

The campaign for the Early Diagnosis of Tuberculosis, led by the National Tuberculosis Association during March of this year, is attracting wide interest and already showing gratifying results throughout New Jersey where its organization has been conducted by the New Jersey Tuberculosis League and its affiliated branches.

Endorsements have been given by the Department of Health, State Public Health Association, League of Women Voters, Federation of Women's Clubs, Contemporary Clubs of Newark and State Medical Society.

Pamphlets to the number of 35,000 will be distributed by Y. M. C., Y. W. C., and Y. M. H. Associations, Libraries, Banks, Department Stores, Life Insurance Companies, Kiwanis and Rotary Clubs; the State Medical Society is distributing abstracts monthly with its Journal; County Medical Societies are making available 10,000 pamphlets on "Early Diagnosis" to the physicians of the state. Poster display includes: 300 posters placed on billboard; 400 window displays used in stores, and 1200 cards used in buses and trolley cars.

The film "The Doctor Decides" was shown at the regular semi-annual meeting of the State Board of Directors of the N. J. Tuberculosis League. Seven medical associations have booked this film, with a speaker. The film "Delay is Dangerous" has been booked for showing before 12 organizations. The Hudson County Medical Society features an address by Dr. Linsly R. Williams.

Radio broadcasts have already been given by the Sanatorium Superintendents under the auspices of the State Medical Society, from municipal radio station WGP, Atlantic City. The regular health period of the Newark Department of Health over station WCCP Friday evenings is being used for a series of talks on various aspects of tuberculosis. They include "Tuberculosis and the Health Officer", by Dr. Charles V. Craster of the Newark Department of Health; "Tuberculosis and the Practising Physician", by Dr. M. Danzis of the Essex County Medical Society;

"Tuberculosis and the Sanatorium", by Dr. Byron M. Harman of the Essex Mountain Sanatorium.

A series of talks on "Tuberculosis, Why and How" from a Jersey City station every Tuesday in March is being broadcast by Dr. B. S. Pollak, superintendent of the Hudson County Sanatorium, and President of the State Public Health Association.

It is declared by leaders of public, voluntary and official health organizations to be too early to evaluate the results of these wide-spread activities. It is anticipated, however, that the objectives of the campaign, the education of the general public and the arousing the interest of physicians in the importance of early diagnosis is being measurably attained. A few easily recognized symptoms have been continually stressed as indicating the necessity for a visit to a physician or clinic for careful examination. Persons suffering from loss of weight, "that tired feeling", indigestion, or the type of cough that "hangs on" are urged to "Let the Doctor Decide".

The coöperation of health officers everywhere is proving most gratifying. No other class of men perhaps realize so keenly the words of Dr. Eugene L. Opie, from the Henry Phipps Institute of the University of Pennsylvania. "The first step toward the control of tuberculosis is the discovery of those who have the disease. The search for patients who have advanced tuberculosis and are a danger to others because they scatter tubercule bacilli is a pressing problem of public health. Recognition of the disease in its earliest stages concerns the welfare of the patient primarily, it is true, but, promptly followed by appropriate measures it is also effective in diminishing the number of persons who spread the contagion. Educational propaganda, reporting of tuberculosis, and the establishment of tuberculosis clinics are the means by which the finding of cases is promoted. The results heretofore have been disappointing. An effective search for tuberculosis is as yet something "good", won by merely wishing we could.

Current Events

TRISTATE MEDICAL CONFERENCE

The meeting was called to order at 10.45 a. m. in the Transportation Club Rooms of the Biltmore Hotel, New York City, February 4, 1928, by Dr. James E. Sadlier, President of the New York State Medical Society.

Those present from New York State were: Drs. James E. Sadlier, Harry R. Trick, George M. Fisher, Arthur W. Booth, Daniel S. Dougherty, Frank Overton, Thomas Farmer, and Mr. Lloyd Paul Stryker.

Representing Pennsylvania: Drs. Arthur C. Morgan, H. W. Albertson and Frank C. Hammond.

Representing New Jersey: Drs. Walt P. Conaway, J. B. Morrison, James S. Green and George H. Lathrope.

Dr. Sadlier: We are honored to day in having with us the legal adviser of the Medical Society of the State of New York, Mr. Lloyd Paul Stryker, who will present the question of "Expert Medical Testimony".

A Consideration of the Need of Legislation Bearing Upon the Question of Expert Testimony

LLOYD PAUL STRYKER, Attorney-at-Law,
New York City.

It is a favorable symptom of the times that the representatives of the medical profession of Pennsylvania, New Jersey and New York by this splendid gathering, as well as by previous conferences, have attested their desire through a mutual exchange of thought to investigate and discover all that may tend to advancement of the healing art. It is the very essence of democracy that representatives of a particular calling should themselves debate and consider the need, if there be a need, for the enactment of new laws for the governing of their conduct.

Legislators respect, and should respect, the considered views of those to be affected by new laws. In this way, legislators may be helped to greater wisdom, which will find expression in the statute books, and in many instances perhaps will be revealed by a decision to add no further burden to the gargantuan and unassimilable mass of legislation with which this country already is afflicted. Due in part to worthy motives, in part to the absorption of men in their own affairs and their consequent willingness to let others regulate them without thought or protest; due in part to the great American delusion that the remedy for all our ills is legislation; there has been too great a tendency, particularly marked in late years, to rush to the legislature for the correction of those evils which could be more adequately remedied by the persuasive force of public opinion and the development of conscience.

The subject assigned me: "A Consideration of the Needs of Legislation Bearing Upon the Question of Expert Testimony", is a large but not a new one. More than 30 years ago, it was considered an old theme. You will find, if you examine the early reports of Bar Associations and the contributions to scientific journals, both medical and legal, that this subject has engaged the eager thought and anxious study of lawyers and doctors who were the leaders of their profession when the oldest of us were young men, and the youngest had not yet been ushered into this strange and complex world.

Shakespeare, as well as the dramatists before his time, the novelists of all ages, the writers and the dramatists of our own day have always found a fruitful subject for their pens in critical discussions of the legal and medical professions. Some have written in praise, perhaps more have censured, but whatever the strictures, just or unjust, throughout the ages mankind has turned confidently to the doctor and to the lawyer with all their problems of body and estate.

Perhaps in no other field has the medical man met with so much criticism as the realm of expert testimony. There is much literature upon the subject. In the trial of innumerable cases where testimony of this kind was introduced, and in the direct and cross examination of hundreds of expert witnesses. I have been given some acquaintance with the nature of the criticisms, and perhaps have thus been educated to some capacity to appraise them, whether or not I am able to do that which no one else has yet done—propose with perfect confidence the one unanswerable remedy.

Let us attend to some of the criticisms of the

expert witness, examine briefly into the history and nature of expert testimony, and consider some of the remedies which have been advanced. From this, perhaps, we may attain to a clearer conception of what we believe and consider advisable to advocate.

"Gentlemen of the jury", said an exasperated lawyer confronted by the ruin of his case through the testimony of an expert witness called by his adversary, "there are 3 kinds of liars—the common liar, the d...d liar, and the scientific expert". "This characterization", wrote William L. Foster in the Harvard Law Review of October, 1897, "was scarcely more severe than that which, in politer language, is bestowed upon learned and distinguished members of the medical profession, not only by defeated lawyers and their enraged clients, but also by eminent members of the legal profession, both lawyers and judges, as well as by worthy and respectable members of the general public outside of the profession involved. It is the voice of the people and of the press, as well as that of the bench and the bar. It is the fashion."²

The United States Supreme Court once wrote that "experience has shown that opposite opinions of persons professing to be experts may be obtained in any amount; and it often occurs that not only many days, but even weeks, are consumed in cross examinations, to test the skill or knowledge of such witnesses and the correctness of their opinions, wasting the time and wearying the patience of both court and jury, and perplexing instead of elucidating the questions involved in the issue."³

In a criminal trial occurring in New York City about 30 years ago, "after a week had been consumed in hearing expert testimony upon a subject concerning which an equal number of doctors had testified exactly opposite to each other, and all with equal positiveness, the judge told the jury to put all the expert testimony out of their minds, and pay no attention to it."⁴ The judge mischarged the jury in that case, but he expressed something of the current attitude toward expert testimony.

In the celebrated Palmer trial in England, in 1856, for the murder of one Cook, by poisoning, more than a dozen medical men with great positiveness testified, but in direct opposition to each other. In charging the jury in that case, Lord Chief Justice Campbell remarked: "With regard to the medical witnesses, I must observe that, although there were among them gentlemen of high honor, consummate integrity, and profound scientific knowledge, who came here with a sincere wish to speak the truth, there were also gentlemen whose object was to procure an acquittal of the prisoner. It is, in my opinion, indispensable to the administration of justice that a witness should not be turned into an advocate, nor an advocate into a witness."⁵

In 1874, Professor John Ordronaux declared: "There is a growing tendency to look with distrust upon every form of skilled testimony. Fatal exhibitions of scientific inaccuracy and self-contradiction cannot but weaken public confidence in the value of all such evidence. If science, for a consideration, can be induced to prove anything which a litigant needs in order to sustain his side of the issue, then science is fairly open to the charge of venality and perjury, rendered the more base by the disguise of natural truth in which she robes herself." And the learned Professor then said: "Some remedy is called for, both in the interests of humanity and justice."⁶

In the Journal of the Franklin Institute, Profes-

sor Charles F. Himes once wrote: "Perhaps the testimony which least deserves credit with the jury is that of the skilled witness. It is often surprising to see with what facility and to what an extent their views can be made to correspond with the wishes or the interests of the parties who call them. They do not, indeed, willfully misrepresent what they think, but their judgment becomes so warped by regarding the subject in one point of view that even when conscientiously disposed, they are incapable of expressing a candid opinion. They are selected on account of their ability to express a favorable opinion, which, there is great reason to believe, is in many instances the result alone of employment and the bias growing out of it."⁷

After citing these among other criticisms, Mr. Foster in his article in the Harvard Law Review previously mentioned, wrote: "It would be deplorable, indeed, if such criticisms were justified by the facts. This 'bias', or inclination in favor of the party by whom the witness is employed, is probably the most frequent complaint of all against the expert witness; and the inclination or partiality is often characterized by terms indicating dishonesty and corruption; but it is my belief, resulting from the observation and experience of many years, that there are few instances in which a scientific witness permits himself to testify or to be engaged on a side contrary to his convictions derived from a careful examination of the case."⁸

"It is not unnatural", continues Mr. Foster, "that a man of strong conviction (at the same time honest and unpurchasable) should become the earnest advocate of his theory, and the zealous assistant of the attorney in preparing, and to some extent conducting his case in court; and the attorney does well to secure his testimony and service (and would be negligent and wanting in fidelity to his client if he did not) by a suitable recognition of his value to him and his cause; and I agree with Professor Himes that there is no rule of ethics that should cause the witness to refuse the reward of his labor that would not apply equally to the attorney, so long as the testimony on the witness stand is without conscious untruth. On the other hand, neither is there anything in legal ethics to require a lawyer to select a lukewarm, half convinced representative of his theory of the case, and probably he never does. But the bias of the expert witness may not always be incidental to his calling or profession, but a purely scientific bias, due to some peculiar view or theory. Against such a bias no amount of self-restraint nor the most sensitive conscience will fortify a man."⁹ If I may be permitted, I should like to express concurrence with these latter views.

In a paper read before the New York State Medical Association on October 24, 1899, the Hon. Willard Bartlett, one of the most distinguished judges of our highest court, declared: "For more than 10 years, the condition of the law in the state of New York in regard to medical expert evidence has been the subject of frequent, active and often acrimonious discussion among doctors and lawyers. Many reforms have been proposed and suggested, but no reform has been carried into effect. In my judgment, failure in this respect has been largely due to a lack of appreciation of the obstacles to be overcome. Without an adequate knowledge of the difficulties to be encountered, no plan of campaign is likely to be successful."¹⁰

Some 37 years ago, Judge Peckham, speaking for our New York Court of Appeals, declared: "Ex-

pert evidence, so-called, or, in other words, evidence of the mere opinion of witnesses, has been used to such an extent that the evidence given by them has come to be looked upon with great suspicion by both courts and juries, and the fact has become plain that in any case where opinion evidence is admissible, the particular kind of an opinion by any party to the investigation can be readily procured by paying the market price therefor.***He (the expert) comes on the stand to swear in favor of the party calling him, and it may be said that he always justifies by his works the faith that has been placed in him."¹¹

But in his article previously referred to, Judge Willard Bartlett wrote: "In reference to this matter, however, I desire to express my dissent from the sweeping condemnation of medical experts in which the courts so often indulge. There is scarcely a case where expert evidence is taken, in which some of the experts are not perfectly honest. They do not deserve denunciation merely because other experts are dishonest, or because it is often difficult to tell the false from the true. The medical profession itself must help us to make the distinction between the two classes easier. However objectionable are some of the aspects of medical expert evidence, it cannot be dispensed with in the administration of justice. Let us remedy the evils, but, while we are endeavoring to do so, let us avoid that exaggerated denunciation which is calculated to convince the community that no surgeon or physician who takes the witness stand as an expert is worthy of belief. Such teaching is a libel on the most unselfish profession in the world."¹²

Perhaps a better understanding of the nature of the criticisms can at this point be attained by a brief excursion into the history and development of expert testimony.

"The normal function of a witness", says one of the most authoritative works upon this subject, "is merely to state facts within his personal knowledge, and under ordinary circumstances his opinion or conclusion with respect to matters in issue or relevant to the issue cannot be received."¹³ "Evidence", in its common acceptation of the term has been defined by Sir James Fitzjames Stephens, in his "Digest of the Law of Evidence", as "Statements made by witnesses in court under a legal sanction in relation to matters of fact under inquiry; such statements are called oral evidence."¹⁴

Thus, ordinarily a witness is confined in his testimony to what he himself heard, saw or did—to a statement of the facts. He is not allowed to speculate about them, draw conclusions or inferences from them, or express opinions of any kind. But "when there is a question as to any point of science or art, the opinions upon that point of persons specially skilled in any such matter are deemed to be relevant facts. Such persons are**** called experts. The words, 'science or art', include all subjects on which a course of special study or experience is necessary to the formation of an opinion."¹⁵ An expert witness is "one who is skilled in some art, trade or science or who has knowledge and experience in relation to matters which are not within the knowledge of men of common education and experience", and the law permits such a witness to "express an opinion on a state of facts which is within his specialty and which is involved in the inquiry."¹⁶

Expert testimony is "admitted because the witnesses are supposed, from their experience and study, to have peculiar knowledge upon the subject of inquiry which jurors generally have not,

and are thus supposed to be more capable of drawing conclusions from facts and basing opinions upon them than jurors generally are presumed to be".¹⁷ Such testimony is allowed where "the jury cannot be supposed to comprehend the significance of facts shown by other testimony, which needs scientific or peculiar explanation by those who do comprehend it".¹⁸

The law then, based as it is upon common sense, has deemed it necessary in the true administration of justice, that a jury should be enlightened upon questions which are beyond the scope of knowledge possessed by the ordinary man. It forbids the giving of opinions by those not qualified to give them, and permits them from those whose special knowledge and study are deemed sufficient to enable them to express them.

The term, "expert testimony", is usually associated with the opinions given by physicians, but it is by no means limited to this field. Thus, experts may be called and express opinions upon many other subjects in which the expert is presumed to possess special knowledge, as for example, in logging, manufacturing, mechanics, mercantile affairs, military affairs, mining, natural history, nautical matters, railroads, hand-writing, and many other subjects.¹⁹

Expert testimony has been permitted in the courts for many centuries. In 1620, in the case of *Alsop v. Bowtrel*, certain physicians testified that a woman who bore a child 40 weeks and 9 days after the death of her husband, might well have borne the child of her deceased husband, and that the delay in the delivery was due to ill usage and lack of strength.²⁰ Forty-five years later, in the famous *Witches' case*, Dr. Brown of Norwich expressed his opinion that there were witches, and elaborated this view by a scientific explanation of the fits to which they were subject.²¹ And in 1678, in the murder trial of *Rex v. Pembroke*, physicians were called to express their opinion as to the real cause of the deceased's death. They expressed their opinions as to the causes of certain symptoms observed upon an autopsy they had seen, and upon the general proposition as to whether a man can die of wounds without fever.²²

In 1744, in the case of *Rex v. Heath*, expert testimony was again employed. It was a trial for perjury. The defendant was accused of having falsely sworn that one Lady Altham had never had a child. The witness testified that he once saw Lady Altham with a "big belly". The counsel then with true Elizabethan directness asked: "What do you apprehend became of that big belly?" The question was objected to, and the court declared: "The apprehension of a witness is asked where no other evidence can be had in capital cases; as where a witness is produced to prove a wound given, he is asked whether he apprehends that wound was the cause of death. That must be asked, for he cannot tell otherwise. It is the best evidence that can be had in that case."²³

The historical student of the law will find many other cases going back at least to the early part of the seventeenth century in which expert testimony was allowed. Indeed, so far back as the year 1345 the court summoned surgeons from London to assist in determining whether or not a certain wound was fresh.²⁴ In the early days of our law, special or "struck" juries were summoned, composed of men having knowledge of a particular science or art. Thus, for example, in 1645, a court in England summoned a jury of merchants to try a merchant's case "because it was conceived they might have better knowledge of the Matters

in Difference which were to be tried than others could who were not of that profession."²⁵

Thus, in going back into the early history of our institutions, it is found that at a very early day the courts appreciated the desirability and the need of securing expert knowledge, in order properly to determine the issues they were called upon to try. Under our system inherited from the earliest days of English history, the jury, with all its faults, has been deemed the best for determining issues of fact. In a certain sense, the opinion of an expert usurps the functions of a jury, and to a limited extent at least, the expert undertakes to decide for himself one or more of the contested issues in the case. It is but natural, therefore, that expert testimony from an early day, although deemed necessary, has been looked upon with some suspicion and no little jealousy by the courts. I have said that the expert decides one or more issues in the case. This is true only in a limited sense, inasmuch as the jury being the final arbiter upon all questions of fact, may, but is not bound to, accept any opinion expressed before it.

The nineteenth century saw an advance in scientific knowledge unparalleled in any other similar period of the world's history. But the advance did not stop with the close of the century. It is still going forward—perhaps more rapidly now than ever before. This is true in every branch of science: engineering, law, mechanics, railroading, medicine, and indeed all others. To an increasing degree, courts are concerned with questions of science and scientific knowledge. So rapid have been the strides in the ascertainment of new truths that science of all kinds has been divided and subdivided, so that those who are really experts are such only in a particular and limited field. Thus, the human body, internally and externally, has been split up by the medical profession, and whereas formerly the general practitioner was able to be expert in every field of medicine, today specialization has become inevitable. Thus, a physician who confines himself to eyes, ears, nose and throat frequently and with justice deems himself incompetent to know and comprehend intestinal diseases or fractures. Similarly, the surgeon and the internist is each specially schooled only in his particular and limited field.

With this vast advance in the accumulation of ascertained truth—an accumulation so large that even experts cannot comprehend it all—it is but natural and right that a lay jury, where a scientific question is in issue, should be enlightened upon the particular question of science involved by one who is competent to enlighten them. Not even the sternest critic of expert testimony, therefore, has thus far contended that it should be entirely done away with. It is necessary; it is indispensable.

There are certain classes of cases in which expert testimony is most commonly encountered. These are in criminal trials where a question of insanity is involved, or as stated in our New York Penal Law, the question of whether or not the accused at the time of committing the alleged criminal act "was laboring under such a defect of reason as: (1) not to know the nature and quality of the act he was doing; or (2) not to know that the act was wrong";²⁶ cases involving the question of the competency of a testator to make a legal will; questions arising in actions for personal injuries, where the question of the extent, the nature and the duration of the injury is involved; and cases of alleged malpractice, where the question is

—did the physician accused comply with or depart from the recognized treatment in general use. Perhaps nowhere so frequently as in criminal trials, has the employment of expert testimony given rise to discussion and criticism. All of us recall the Thaw, the Leopold and Loeb, and the many other notorious cases as falling within this category.

Let us now state and attend to some of the specific criticisms against expert testimony. The most frequent of these may be stated as follows:

(1) The claim that the expert is biased in favor of the party calling him, and that he thereby becomes in reality an advocate rather than a witness made so by reason of his commitment to and compensation by one side of the controversy.

The law has always recognized the right of an expert to compensation for his services. He acquired his knowledge through long study, experience and application. His knowledge is his stock in trade. There is no more reason why he should dispense with his wares without compensation than the merchant should be required to donate his goods without reward. Criticism, therefore, of an expert's compensation is one which the law itself has answered by allowing it. It is a criticism which has no justice.

Does an expert witness have bias in favor of the side which calls and pays him? Undoubtedly the opinion which he expresses he endeavors to maintain. He is called to express that opinion, and he would be lacking either in conscience or ability if he did not, to the best of capacity, sustain it. The question, therefore, is not whether he is biased in favor of the party calling him, but whether or not he has honestly expressed an opinion which he honestly believes in. If he has, he has done no more than his duty, and no one should be criticized for that. If he has not expressed an honest opinion, undoubtedly he should be censured for it, but how can this be determined?

Medicine is not an exact science. Few sciences exist in which differences of opinion are not possible. If the expert physician's opinion is not honest, he should, in the hands of an able cross examiner, meet with his just deserts, and the fallacy and error of his opinion should be, and usually are laid bare by this sharp weapon of the law.

I have cross examined hundreds of expert witnesses. I have met with few indeed whose opinions seemed to me intentionally dishonest. Where I have encountered opinions of that kind, perhaps I have had a reasonable amount of success in exposing them. But the weapon of cross examination should be sharpened by study of the particular scientific question involved, and a readiness to confront the expert with the countervailing views of eminent authorities who have written upon the subject.

Where the expert is the "advocate" of the side which calls him—if what is meant by this is his effort to sustain a given view irrespective of its validity—such an effort usually is its own undoing, and a demonstration of the insincerity of the opinion redounds to the just disadvantage of the side which sponsors it. From my experience, the criticisms which we have just considered do not require the remedy of legislation. The law is already adequate to meet the problem.

(2) The criticism is often voiced that something should be done about expert testimony, because it results in conflict: differences of opinion

expressed by one side and the other leading to confusion.

The same criticism might be directed toward lay testimony. There is always a conflict, one side maintaining one proposition, and the other another. Our inherited system of court and jury, despite all the criticisms, has since the days of Magna Charta been deemed the wisest means of determining such disputes, and in the long run administering true justice. As long as there are differences of opinion upon expert questions, especially in the domain of medicine, so long will these differences be voiced and championed in court, as they are elsewhere, in medical consultation, medical conferences, and in the medical journals. From this conflict, indeed, progress has resulted and the errors of accepted conclusions have been exposed.

Willard Bartlett, in the paper previously alluded to, has discussed this subject with much interest. He refers there to the trial in England many centuries ago of the Suffolk witches. These 2 old women were brought to trial before Sir Matthew Hale, having been indicted for bewitching several persons. Sir Thomas Browne, the celebrated author of *Religio Medici*, was called as an expert witness for the prosecution. Three of the supposed victims were produced in court for his inspection. He also listened to the oral testimony of the prisoners, and the learned Dr. Browne then expressed his opinion under oath "that the persons were bewitched;****that in Denmark there had been lately a great discovery of witches, who used the very same way of afflicting persons, by conveying pins into them****as well as needles and nails". This learned expert of 3 centuries ago then rendered his opinion "that the devil in such cases did work upon the bodies of men and women, upon a natural foundation (that is) to stir up and excite such humors superabounding in their bodies, to a great excess, whereby he did in an extraordinary manner afflict them with such distempers as their bodies were most subject to", and that the swooning fits were "heightened to a great excess by the subtlety of the devil, co-operating with the malice of these which we term witches, at whose instance he doth these villainies".²⁷

In his instructions to the jury, Sir Matthew Hale told them that there was no doubt that witches did in fact exist. The poor old women were convicted and later they were executed. "But", records the reporter, "they confessed nothing". This case, says Willard Bartlett, "emphasizes the objections to any change in the present system which would relieve experts from liability to the fullest cross examination. If cross examination had been in vogue then, as it is now practiced in the case of expert witnesses, a conviction could hardly have been the result of the trial of the Suffolk witches."²⁸

Judge Bartlett then referred to a case in California in 1899, where the plaintiff, a married woman, was injured in a railway accident. One of the questions litigated was the extent of the injuries she had sustained. She had been examined by 3 or 4 medical men on her own behalf, and as many for the defendant. All the experts on both sides agreed that the plaintiff was suffering from a uterine or ovarian tumor, although they differed as to whether the tumor could have been produced by the plaintiff's fall. She recovered a verdict of \$20,000 against the railroad. Ten days later she gave birth to a

child at full term, although still-born, and it was admitted that there had been no tumor at all.²⁹

Judge Bartlett refers to this case as demonstrative of the fact that serious error may lurk in the conclusion of experts "even when they have agreed". Had the experts in that California case differed as to whether the plaintiff was afflicted with a tumor or was pregnant with child, perhaps they would have been criticized for differing. Yet, by such a difference, they would have come nearer to the truth than was attained by their unanimous concurrence.

I see no reason why expert witnesses should agree, provided they differ honestly. If the difference confuses, the confusion can be cleared up by the clear charge of a competent and honest judge. There is always some confusion in the trial of a sharply contested issue of fact, and far more frequently than is generally believed, juries prove themselves entirely competent, with the aid of the lawyers and the judge, to unravel the confusion, arrive at the correct conclusion, and thereby do justice in the case.

(3) The payment of contingent fees to experts has been criticized. This criticism is not without some justice. The expert should be paid for his opinion, but should have no stake in the outcome of the case. But what applies to experts, applies equally to lawyers. The question of contingent legal fees is now well to the front in the forum of public discussion. Probably the system is wrong. On the other hand, a worthy litigant with a just case, but without financial means, might be deprived of justice if he could not secure the services of a lawyer upon a contingent basis, and this applies to the expert witness also.

(4) A criticism has also been offered because wealthy litigants are enabled to overcome the jury with a mass of expert testimony to the disadvantage of poor litigants.

There probably is some force in this, but until we attain that ideal state (if it be such) where all men are equal in estate, there is always some advantage in wealth, and a consequent disadvantage in poverty. These differences however, by the law of compensation, usually are equalized. Thus, where a wealthy litigant excels in power to marshal witnesses, the poor litigant has the advantage in the matter of sympathy from the jury. The jury box and the ballot box are great equalizers and stabilizers in this country.

Should poor litigants in civil cases be allowed, upon making petition to the court, to obtain an order assigning them from a selective list one or more experts in their cases, their compensation to be paid in the first instance from the public funds, which funds could be reimbursed from any verdict which the plaintiff might recover and collect?

Such a question might be worthy of consideration, although personally I do not favor it. Such a plan for poor defendants who are accused of crime, no doubt, is just. At all events, that plan is now in operation in our New York Criminal Courts. Through recent amendments to Section 308 of our Code of Criminal Procedure, it is provided that, "In any case in which experts may be employed as witnesses and in case it shall appear to the satisfaction of the court or a judge thereof that the defendant is not financially able to employ experts, the court to which the indictment is presented or sent or removed for trial or a judge or justice thereof may direct the employment of expert witnesses for the defendant in number not

exceeding the number sworn or to be sworn for the prosecution at an expense in the aggregate of not exceeding the sum of ten hundred dollars. Allowances under this section shall be a charge upon the county in which the indictment in the action is found, to be paid out of the court fund, upon the certificate of the judge***."

(5) A further criticism is urged, in that mistakes may arise even where all experts agree.

This is true, but it is no more true in this field than in any other avenue of human endeavor. So long as there is the personal equation, mistakes will happen. Lawyers make mistakes, railroad engineers make mistakes, and so also (if you will read the decision of the higher courts) do judges. No legislation can cure this.

(6) The requirement of the hypothetical question has often been condemned.

I do not believe that it has been condemned with great frequency by those who have had long experience in using it. The length and character of the hypothetical question, the trial judge in his sound discretion now has power to regulate. This discretion, like all other discretions, may be and no doubt at times is abused, but this is not a sufficient basis for a sweeping condemnation of hypothetical questions.

The expert must necessarily express his opinion upon some hypothesis. He is not there to express a general philosophic view which has no relation to the case at hand. He is called to give an opinion upon the facts in the case. Nobody knows exactly what the facts will be, until all of the lay witnesses have been examined and cross examined. The hypothetical question places before the expert a state of facts finding its basis in the evidence. In other words, he is asked to assume facts which have been established in the trial. Thus, it frequently happens that an expert who has reached an opinion based upon the assumptions presented to him by one side or the other in advance of trial, is forced to withdraw that opinion when new facts are developed, or the supposed facts previously presented to him are not established.

The hypothetical question must present an hypothesis based upon the established facts. If the lawyer asking the question assumes therein facts which have not been established, an objection to the question will be sustained by the trial judge, and he will be forced to reframe his question until it does contain only the facts which have been established. An apparent exception to this rule is found in the permission to propound a hypothetical question based upon facts which the lawyer expects later on in the trial to elicit. The lawyer, however, follows this practice at his peril, for if later he should fail in establishing the evidence which he has included in his question, the jury will be instructed that it may discount the opinion rendered if they find that it is based upon facts which have not been proved before them.

From an experience in propounding and objecting to hundreds of hypothetical questions, it is my opinion that there is no need for legislation on this subject. The discretion of an intelligent and fair judge is a sufficient safeguard.

(7) A further ground of criticism of expert testimony frequently stated is based upon the want of satisfactory expertness, with the result that charlatans are permitted to testify.

This is the most tenable of any of the grounds of criticism urged. In "Legal Medicine and Tox-

ology", it has been stated:³⁰ "The great progress of the last 50 years in scientific medicine has been manifested also in an elevation of the principles of forensic medicine. Many questions, upon which formerly there would have been a difference of opinion between doctors, have now become established facts. We have a better knowledge and a better class of experts to aid in the cause of justice. But even so, there is much improvement to be desired, and expert testimony has still a reputation for uncertainty and difference which better methods in the selection of the expert witnesses and better methods of presentation of their really valuable testimony before the tribunal will finally overcome. Among the evils of the present system is that in some departments of legal medicine physicians who are really not experts, in the true sense of the word, can still qualify as such. A professorship of therapeutics and of insanity in an unimportant medical school, the honorary position of consulting physician to an asylum, or the position of a coroner's physician, does not necessarily qualify a physician as an expert alienist or pathologist, and yet the court generally recognizes such nominal insignia of office as evidence of fitness to testify, although the professor of therapeutics may have no practical knowledge of insanity, though the physician may never have visited the asylum to which he has been made consultant by courtesy, and though the coroner's assistant may have been created by purely political influence, with no regard to his attainments as a pathologist. An evil of this kind has perhaps no remedy save in the elevation of the ideals and standards of the whole body of medical practitioners. Its correction can be made by physicians alone or in cooperation with members of the legal profession, who can in their choice of experts, select only such as are known to be of highest reputation for honor and integrity."

The New York law on this subject is that "if a man be in reality an expert upon any given subject belonging to the domain of medicine, his opinion may be received by the court, although he has not a license to practice medicine. But such testimony should be received with great caution, and only after the trial court has become fully satisfied that upon the subject as to which the witness is called for the purpose of giving an opinion, he is fully competent to speak".³¹ In the case just quoted from, the expert called had not been admitted to practice medicine. The court said of him that he was "not prima facie competent" for this reason, but held that it was possible to qualify him if it were shown that he possessed the requisite knowledge, even though he had no license to practice.

Whether or not a witness is in fact an expert, is a matter solely for the trial court—a question which it must decide upon its conscience after a consideration of the established qualifications or lack of them. The exercise of this discretion one way or the other, is not open to review upon appeal.³²

In his treatise on the law of evidence, Mr. Wigmore has written: "The trial court must be left to determine, absolutely and without review, the fact of possession of the required qualifications by a particular witness. In most jurisdictions it is repeatedly declared that the decision upon the expert mental qualifications of witnesses should be left to the determination of the trial court."³³

We have no quarrel that the question of the

qualification of an expert witness should be determined by the trial judge who, in his discretion, after a consideration of the facts, is empowered to decide whether or not the witness is in fact qualified, and were the trial judges more frequently to decide that an unqualified witness is in fact not qualified, in my opinion most of the criticisms on this branch of our subject would be eliminated.

A notable example of this was found in a case tried several years ago by my predecessor. In that case, the question involved was whether in the performance of an ethmoidectomy the defendant surgeon had carelessly punctured the wall of the nasal cavity and forced into the orbital cavity an instrument by which the optic nerve was injured or severed, causing the loss of the eye. A young doctor was called as an expert for the plaintiff. He was 26 years old. He admitted that he was a "professional testifier as a side line". He had never performed an ethmoidectomy, and did not do any major surgery. His practice was confined to giving medicine. Although he had never performed an operation on the brain, he declared that he would not hesitate to go into court as an expert witness and testify how it should be done.

The witness was preliminarily cross examined by Mr. Whiteside, who elicited these admissions. Mr. Whiteside then challenged the qualifications of the witness and objected to his being allowed to testify as an expert, to which the trial court responded: "In all my experience in court in 20 years, I never knew of a court to exclude testimony of one who offered himself as an expert."

In that case the law should have been such as to enable the Judge preliminarily to rule upon the qualifications of that doctor. Under existing law, as he no doubt correctly interpreted it, that young man, who on his admission was not qualified as an expert on the subject concerning which he testified, was permitted to give expert testimony. Here is a subject which perhaps calls for legislation.

The question of enacting laws for the government of expert testimony has frequently been considered by both the medical and the legal professions. In 1909, for example, a committee of the New York State Bar Association was appointed to report "on the regulation of the introduction of medical expert testimony". The committee consisted of these eminent members of the profession: A. T. Clearwater, Austin G. Fox, William N. Dykman, Louis L. Waters and Adelbert Moot. These lawyers invited the cooperation of the Medical Society and the Homeopathic Medical Society of this state. The medical and the legal professions thus united in a careful consideration of the problem. This committee, in a very well considered and carefully reasoned report, after reciting the various criticisms of expert testimony which had come to them, concluded: "After giving to the subject a most careful and thorough consideration and bearing in mind:

First. That the sixth amendment to the Federal Constitution and the fourteenth section of the Bill of Rights of this state require that the accused in all criminal prosecutions has the right to be confronted with the witnesses against him.

Second. That every party to an action, civil or criminal, has the constitutional right to call such witnesses as he may deem important to the maintenance of his cause, and the right to cross examine those who may be called against him, your committee are of the opinion that the remedy for these evils lies with the Bench and Bar rather than with resort to restrictive legislation.

Primarily with the Bench, not the trial Bench alone, but the Appellate Tribunals as well, it is within the power of Judges at *Nisi Prius*, to require a greater degree of competence upon the part of persons claiming to be experts by the simple but effectual method of defining to a jury with force and precision the distinction between a witness proved to be thoroughly qualified to speak upon the subject regarding which his testimony is offered, and one whose claim to speak is predicated principally upon the fact that he is paid to do so.

If trial Judges will pursue this course and are sustained in so doing by the Appellate Bench, courts of justice will be rid of corrupt and worthless so-called experts, provided the Judges themselves are animated solely by a wish to see justice properly administered.

It is with profound regret, that your committee is forced to admit that the practice sometimes pursued by some Judges of converting trials into spectacular dramas which not infrequently descend to comedy, and degenerate into farce, degrades the administration of justice.

Occasional lack of competency and experience in judicial position is one of the misfortunes of our public life, but not less disastrous is the weakness of Judges who find it more agreeable to occupy the center of a stage than to see that justice is carefully administered solely with regard to the rights of the individual and the state.

Nor is the Bar blameless. Not only do some of its members connive at the hiring of corrupt and incompetent so-called experts, but they artfully and selfishly cultivate and largely are responsible for the fallacy that a witness is to be discredited if he can be disconcerted ('rattled'). Thus the art of cross examination, so potent for good when fairly and properly used, plays havoc with hard-earned and well-deserved reputations in the hands of lawyers whose sole ambition it is to win. Scientific opinion to be of controlling value can be given only under conditions of mental repose. The haggling, sharp interruptions, uncalled-for wit, insolent comment and the other too common features of important civil and criminal trials are not such conditions. While they put some witnesses on their mettle, they throw the majority and the more competent into a state of mind in which all sorts of stupidities may be expected and are committed.

The subject is one of such great and growing importance, and the demand for a reform of existing methods is so widespread and imperious, that your committee, having in mind the prevalence of professional inertia, have framed a bill, a copy of which is hereto annexed ****."34

The bill which this committee recommended for enactment was a conservative one. It provided for the appointment by the Appellate Division of each Department of at least 10 and not more than 60 physicians in each judicial district "who may be called as Medical Expert Witnesses by the Trial Court or by any party to a civil or criminal action in any of the courts of this state, and who when so called shall testify and be subject to full examination and cross examination as other witnesses are".³⁵ They were to be allowed for their services "such sums as the Presiding Judge may allow, to be at once paid by the Treasurer or other fiscal officer of the county in which the trial is had".³⁶ The bill further provided: "This act shall not be construed as limiting the right of parties to call other expert witnesses as heretofore."³⁷ The debate which ensued at the annual

meeting when this report was considered, is interesting and instructive.

"In my opinion", said Judge Davy, "the objections to expert testimony could not be remedied by giving the court power to select experts recommended by the New York Medical Society. Such a rule of procedure would be too radical a change from our present system to meet the approval of the legal profession. The experts might also disagree, and would be no more liable to reach a correct conclusion than the experts selected by the defendant or the prosecuting attorney.

Such a restriction would deny the accused in a criminal case his constitutional right to summon and employ his own witnesses.

Neither would I favor a jury composed wholly or in part of experts; they would be no more liable to agree in the jury box than on the witness stand. A jury constituted as our juries are forms the very best tribunal for the trial of disputed questions of fact, even where scientific questions are involved. Men who ordinarily compose our juries are more likely to arrive at an impartial and correct conclusion than a jury of experts. They certainly would not be influenced by pride of opinion, as might be the case with experts."³⁸

And Judge Davy further said: "I would, however, make the qualification of expert witnesses rigid in its requirements, and no expert in a capital case should be permitted to express an opinion unless he has made a specialty of the particular disease which is the subject of inquiry."³⁹

And he went on: "I am also aware that there is a tendency among some professional experts to make excuses for crime by increasing the number of mental diseases called insanity. This is one cause for severe criticism to which the medical expert has been subjected by the legal profession and the public; but I am unable to discover any remedy for this class of testimony, or any good reason for excluding it. The testimony of an expert upon any branch of insanity which tends to establish the fact that the party who committed the alleged criminal act was laboring under such a defect of reason as not to know the nature and quality of the act he was doing, or not to know the act was wrong, is competent evidence, and cannot be excluded."⁴⁰

And Judge Davy further said: "I am almost opposed to the court selecting a certain number of the expert witnesses recommended by the State Medical Society. The mere fact that the court selects them would not make them more reliable or honest in giving their testimony. An honest expert witness will give an honest opinion, regardless of the question of compensation or who employs him; and a dishonest witness cannot be relied upon under any circumstances in giving his testimony. There would also be great danger that the jury would be unconsciously biased in favor of the witnesses selected by the court."⁴¹

Despite the objections of Judge Davy and others, the report of the committee was accepted, and the New York State Bar Association went on record in favor of the bill which had been drawn. But the bill did not become a law.

The idea of having the court appoint experts was not a new one. The suggestion had frequently before been made that this right should exist, and that no witnesses except those designated by the court should be called. Concerning this suggestion, Judge Bartlett in the article previously referred to, said: "I believe that justice in the United States is generally well and honestly ad-

ministered; but such a thing is conceivable as that a judge might unwittingly appoint incompetent official experts who were anything but representative of the best element in the medical profession. In what position, then, might a physician, sued for malpractice, find himself, if condemned by their opinions and unable to exonerate himself by calling as witnesses his non-official brethren whose testimony would demonstrate that the appointees of the court were wilfully wrong, or ignorantly mistaken? A man may be a good judge of law and yet a very poor judge of doctors. I should be sorry to have to be treated by the physicians of several able judges whom I have known in past years, and yet, I am certain that in each case his physician would have been the first either of these judges would select for any official medico-legal preferment within his power to bestow.⁴²

A more recent suggestion for legislation upon the subject of expert testimony came to our attention a few days ago. It appears that at the House of Delegates of the American Medical Association in Dallas, in 1926, the principle that the courts be authorized to appoint expert witnesses payable out of the public funds, who would furnish a written report was endorsed.⁴³ A draft of a proposed bill, concededly not a final one, was prepared by the Bureau of Legal Medicine and Legislation of the A. M. A. Under this bill, it is provided that any party may petition the court for the appointment of "such expert witnesses as in the opinion of the trial judge may be proper, to investigate the facts of the case and to testify with respect to them, or to give opinion evidence, or to do both, either generally or within such field as the petitioner or petitioners may name and the trial judge approve"; but it is also provided that "any party to a cause may elect" whether he will make such petition or "will introduce expert witnesses on his own account in the manner now authorized by law". The petitioner shall state in his petition "the *problems* to be submitted to the expert witnesses, if any be appointed", and it is provided that hypothetical questions, if any, "be submitted in the petition", and that these "shall be based exclusively on assumed facts set out in the petition, which the petitioner undertakes to prove". If the court grants the petition, then the experts appointed by the court preclude the person who has petitioned for them from calling other experts.

The bill further provides: "Each expert witness so appointed and commissioned by the court shall have the right to examine all evidence pertinent to the issues that have been submitted to him, which evidence it is proposed to introduce in the case on behalf of the party or parties at whose instance such expert witness was appointed. Each expert witness so appointed may examine under oath such witnesses as may be produced before him by any party or parties, and may administer oaths for that purpose." The experts appointed are required to state to the court "the *problem* or *problems* as presented by the court", their analysis of the problem, the evidence submitted to the expert witnesses or collected by them, the names of the witnesses examined by the expert witnesses, and the experts' deduction from all the evidence submitted to them.

The bill further provides that the report of the expert, although open to objection and exception by either party "shall be read to the court or jury, as the case may be, in the presence of such expert witnesses", and therefore such experts may be subject to cross examination like other parties, "but the qualifications of such expert witnesses

*** shall not be open to attack ***". The bill further provides that the presiding Judge or the jury "shall consider and give due weight to the methods of their respective appointments, whether by the court or directly by any party or parties".

In my opinion, this bill is subject to so many criticisms that it would be difficult to state them all, but I shall endeavor to state some of them.

First: It erects the expert appointed by the court into the position of a quasi-referee, enables him to "examine under oath such witnesses as may be produced before him by any party or parties and may administer oaths for that purpose". It provides then for what amounts to a preliminary trial to be presided over by a doctor who, though excellent in his own profession, may have a very hazy knowledge of the rules of evidence, and the methods of eliciting testimony. He might do so well or ill, according to his peculiar ability. It would be strange if he did not elicit much hearsay or other incompetent proof upon which he would, although he should not, base his expert opinion. Such a course would immeasurably increase the complexities of a lawsuit, and would result in that worst of all legal evils—the law's delay.

Second: Through lack of proper training, or perhaps lack of time, such a quasi-referee, acting in the guise of an expert, might fail to summon witnesses who could testify as to relevant and essential lay facts and hence the opinion which the expert would reach would not be based upon the facts that would be elicited at the trial.

Third: The provision that the hypothetical question should be submitted to the expert in advance of the trial, has the obvious defect that while it may represent that which the lawyer presenting it may hope to prove, it may not represent at all that which at the trial he would succeed in proving, and hence the whole hypothesis upon which the expert is invited to express his opinion would be false or faulty.

Fourth: The expert under this bill is directed to "report on and testify as to any problem or problems submitted to him". This provision seems little short of absurd. It is not upon "problems" that an expert witness is required to give his opinion, but on a definite, concrete statement of facts established by sworn lay testimony at the trial.

Fifth: The provision of the bill that the person securing the appointment of an expert witness is precluded from calling other experts, would deny him a substantial right if the expert appointed by the court were mistaken in his opinion, or if, as Judge Bartlett suggested, the expert deemed competent by the court were in fact not competent. The party who had followed this procedure would be denied the opportunity of introducing a competent and proper opinion at the trial.

Sixth: The provision that the expert's report made before the trial should be read in evidence, is thoroughly unsound. If this report contains in it incompetent lay testimony, and opinions predicated upon facts which are not proved, then improper evidence is laid before the jury, of a prejudicial character and detrimental to the true administration of justice.

Seventh: The provision of the bill requiring that the qualifications of the experts appointed by the court "shall not be open to attack", is also bad. If the expert is incompetent, and his opinion is wrong, it should be attacked, and his report should not be immune from attack merely because it is made by an expert appointed by the court.

Eighth: The bill further, in providing that in contrasting the testimony of expert witnesses appointed by the court and those not appointed, "due weight" should be given "to the methods of their respective appointments", draws an arbitrary and unfounded distinction in favor of the expert appointed by the court, and against the expert which the court has not appointed, which distinction may not be based upon the competency of the experts and the value of their opinions, but upon a mere arbitrary distinction.

But assuming that all of these objections were unsound, the provision enabling the party either to petition the court to appoint the expert, or to "elect" to "introduce expert witnesses on his own account in the manner now authorized by law", renders the whole bill a mere gesture.

In France and Germany, we are told, there is in vogue a system by which the court may order an investigation by experts, either selected conjointly by the contending parties, or appointed by the court itself. In either country, the court may be guided by the expert opinion signed and submitted to it, or may order a new investigation, or finally may feel not constrained to be bound by such opinion if opposed to the judge's own convictions.⁴⁴

There is little, if any, value in studying the precedents of France and Germany, whose jurisprudence, as is well known, is based upon the Roman law. Their whole system of administering justice differs fundamentally from ours. Under the English and American law, the right to call any witness whom the party chooses, and the right to examine and cross examine them in open court, for many centuries has been deemed a cherished right necessary for the true administration of justice.

In his paper read before the New York State Medical Society, so frequently referred to, Judge Bartlett suggested that the proper remedy for existing evils in expert testimony lies in adequate amendments of the code of ethics by which physicians and surgeons regulate their own conduct. "By the code", Judge Bartlett said, "you regulate your own conduct in the practice of medicine, and insist that those who join the ranks of your profession from year to year shall agree to regulate theirs. No statute could practically be more binding. Why may you not extend its provisions so as to embrace the conduct of the medical man when he assumes the rôle of the expert witness? The matter is absolutely within your own control. You can declare in your code that a certain course of action on the part of a medical expert shall be deemed honorable and professional, and that a certain other course of action shall be dishonorable and unprofessional. *** A signal advantage of dealing with the subject in this way is that it would involve no interference with existing rules of judicial procedure. The rights of litigants or the manner of trying lawsuits would in no wise be affected. The needed reforms would be brought about by the compulsory operation of your own code of ethics acting personally upon each member of your profession. That code, amended as I am sure it might be if the physicians and surgeons of this country took the matter seriously in hand, by commanding medical experts to do what is right and subjecting them to professional censure and obloquy if they did what was wrong, would be more efficacious than any law on the subject which any legislature could enact. It would be your own law, adopted by yourselves, and it would have that powerful sanction

which belongs alone to laws which are a natural growth out of the conditions which lead to their adoption. To the action of your profession in some such way as this, I look with more confidence than anywhere else for the ultimate accomplishment of all that is desirable in the improvement of medical expert evidence."⁴⁵

Having listened so long, perhaps you would be interested in, whether or not you may be persuaded by, my own conclusions on this subject. These conclusions are:

First: There are existing evils in expert testimony. But how many, if any of these, should or could be remedied by legislation is another question. The fact that evils exist does not prove that legislation is the remedy. In this country too many rather than too few laws are passed. Many new enactments are ill-considered, some of them seem hardly to have been considered at all. Let us, therefore, make haste slowly in the advocacy of new statutes, and if we are to sponsor anything, let us be certain beyond a peradventure that that which we espouse will improve rather than make worse the conditions now obtaining.

Second: I believe in our inherited Anglo-Saxon system of the administration of justice through the medium of court and jury, where every witness must be publicly examined and cross examined in open court, and where no witnesses are entitled to any further rights or privileges than any other; where each must stand or fall, dependent upon the veracity, the character and the intelligence which he has brought with him to the witness stand.

Third: I am against the appointment of expert witnesses by the courts in civil cases. Such an arrangement, if it precludes a party from the privilege of calling those of his own selection, deprives him of a substantial right, the right to produce testimony of his own selection, and which in many instances may be of a greater scientific and probative force than that obtainable from official appointees. The appointment of experts by the courts is open to serious constitutional question and indeed, in at least one jurisdiction,⁴⁶ such a law has been declared unconstitutional. An arrangement whereby a party may call his own experts, in addition to those appointed by the courts, or may choose which he will call, would render nugatory any supposed advantage in having court-appointed experts, and would add to the complexity and technicality of court procedure already far too deeply enmeshed in that to which laymen, not without just cause, have so frequently referred as "red tape". It would increase that ill of which since Shakespeare's time, mankind justly has been complaining: "the law's delay".

Fourth: I would not interfere with the hypothetical question, nor deprive an expert witness of the widest latitude (provided his answer is based upon the proved facts on which the hypothetical question is predicated) in expressing any opinion which his conscience and scientific knowledge will enable him to express.

Fifth: The only legislation which I would favor would be that clarifying and sustaining the discretion of the trial judge in deciding in the first instance, whether or not a witness is in fact qualified to give expert testimony on the specific matter concerning which he has been called to render his opinion, and I would make it clear that the mere fact that a man has been licensed to practice medicine does not in itself qualify him to express an expert opinion, unless on his sworn

testimony it appears that by special knowledge and experience he is in truth and in fact qualified to express it upon the particular subject in hand. Whether he is qualified or not is a question which should be clearly lodged within the sound discretion of the trial court.

Sixth: Legislation of the kind proposed might help, but the real remedy for existing evils lies in the better development of conscience on the part of those who now for pay express opinions in which they do not honestly believe or, who for hire advance unfounded or disproved theories in an effort to thwart justice. This remedy—the development of conscience—could best be made effective through the suggestion of Judge Willard Bartlett, the adoption of an amendment to the doctors' principles of ethical conduct specifically and in clear terms condemning as unprofessional those practices which our enlightened lay and scientific opinion agree in condemning as improper and unworthy.

I have been asked in this paper to express my own conclusions, and I have done so without fear or favor. I should, however, make it clear that they are my own conclusions and do not purport to be those of any client whom I serve.

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DISCUSSION

Dr. Frank C. Hammond, Philadelphia: I am sure we are very grateful to the author of this paper for the scholarly and academic presentation which he has given of this subject.

There is no law on expert medical testimony in Pennsylvania. The only thing that applies is the general law, which provides that witnesses shall qualify before being permitted to give expert testimony in any line. Honesty of the expert is the crux of the situation. The contingent fee is the serpent in the grass. We feel that there is an unfortunate situation existing in the cooperation of the dishonest lawyer and the dishonest physician who is willing to give professional expert testimony for the fee alone and we can, I think, be very hopeful that something may be done by the State Bar Associations to eliminate as far as possible the dishonest lawyer, and by the State Medical Societies to reduce to a minimum this practice on the part of the medical expert witness.

There should be eliminated the professional expert, one who spends his time in a lawyer's office, coaching the claimant, suggesting symptoms and answers to the examiner, and who will testify on the basis of a contingent fee.

The following editorial appeared in the Pittsburgh Medical Bulletin a couple of weeks ago: "We have many times heard brother medical practitioners express in positive terms of disrespect their opinions of those doctors of medicine who constantly appear in court, on personal injury cases, associated with such lawyers as to lead one to believe that the fee to be received for medical testimony will be based upon the size of the verdict handed down to the plaintiff. Never until recently, however, have we had opportunity to learn the opinion of a prominent jurist regarding the true worth of the testimony of the professional medical expert. In a personal injury case recently tried in Pennsylvania a verdict was given against the defendant from which an appeal was made for a retrial on the ground that the verdict was excessive. The lower court having refused a new trial, the action was carried to the Supreme Court of Pennsylvania. Judge Kephart, of the latter court, in reversing the lower court and granting the motion for a new trial, referred as follows, in no uncertain terms, to the almost negative value of the testimony of the professional medical expert:

"The professional expert, whose testimony we relate above, frequently appeared in court as a witness in personal injury cases, and the inference from his evidence is that he made the giving of testimony in such actions a business. One of the evils in the trial of personal injury cases is padding the claim with evidence of the professional medical expert. It certainly is not proper ethical practice. There may be cases where one, because of knowledge peculiar to a given litigation, is frequently called in as an expert, whose testimony may be accepted without question, as for instance, an expert in land and building values; but this evidence is susceptible of rebuttal, and moreover, unlike the medical testimony, it is not buttressed by technical knowledge accompanied by scientific expressions capable of confusing a jury. When considering a motion for a new trial, based on an excessive verdict, ordinarily but little weight should be given to such testimony."

Now that we have the opinion of a distinguish-

ed judge as to the worthlessness of most of such testimony and the ethical standards of such practice, we would like to have the opinion of qualified neurologists regarding the actual harm to the injured plaintiff that may result from his or her listening in court to the testimony of a physician under oath to the effect that the injuries received, which are oftentimes only subjectively manifested, are permanent in character.

We believe that the professional medical expert is often ethically and morally off-color, and must be differentiated from the physician who is called upon occasionally to give in court expert testimony which is based on knowledge and experience which makes him an authoritative specialist."

So far as the second part of the editorial is concerned, we would say there would be no effect upon the individual because he or she knows that they have been told what to say by the professional medical expert. They would know that they are *particeps criminis* in the fake answers they may give, and I do not see how it could possibly have any effect upon the individual.

We have in Pennsylvania men known as medical professional experts who are subject to call by lawyers from 9 a. m. to 5 p. m. Some of them, I understand, are in attorneys' offices from 9 to 5 each day and all ambulatory cases are brought directly to them and examined. There was a case recently tried in Philadelphia where the woman on the stand was undoubtedly giving testimony in which she had been coached by a professional medical expert. She stated on the witness stand that she was unconscious for 48 hours after the accident. In cross examination she admitted having been examined in the lawyer's office a few hours subsequent to the accident. I had a talk with a Judge of our Common Pleas Court and he said that he would consider fully 90% of the accident cases as fraudulent, and he said the unfortunate part is that most of the lawyers involved in these cases are known to the courts as being dishonest and the medical expert witnesses too often known to be dishonest and that his custom in such cases is to discount the medical expert testimony by 50%. If verdicts are awarded he will call the opposing lawyers to the Bar and discuss with them the circumstances of the case, if he is not satisfied, and will recommend that the verdict be cut 50%. If they desire to have the case go to another trial it is done but usually they do not and are perfectly willing to accept a smaller sum. He mentioned several names of physicians whom he considered as undoubtedly dishonest professional medical experts.

I will cite one case which is simply illustrative of many. I was driving into Broad Street, Philadelphia, one day about 8 years ago, and turning off the street swung around an electric light island. I saw a woman standing on the island and recognized her as one of my neighbors. She looked up at me and deliberately stepped off the island into the rear of my car and was thrown into the street. She was instantly on her feet, I put her in the car and took her to her home. She said that she was confused when she stepped down into the street. In that short time a man had run over and attempted to hand her a card. I intercepted it and found it was the card of a very well known lawyer, from the standpoint of his dishonesty in accident cases. The man who handed out the card was driving up but did not really see the accident. The woman said to me that she was very sorry she had caused any inconvenience but that she became confused and walked directly against

the car, and felt that she was entirely at fault. Within a couple of weeks I received a letter from a lawyer in Philadelphia, the characteristic nasty letter from lawyers of this type that frightens the ordinary individual. The letter was turned over to my insurance carrier, stating my case and the fact that I had as a witness the lady herself who had made the statement that she was at fault. The insurance company said this was of no value because there was no one present to verify the woman's statement to me. The lawyer for the woman and the insurance carrier could not come to any agreement and I insisted that the case be allowed to go to trial. The company refused to do this because the juries were awarding unheard of verdicts and they were not willing to take the chance. Suit was instituted and \$30,000 damages asked for, the statement being made that the woman was totally paralyzed; also \$20,000 asked for her husband based on the statement that his wife would never be able to walk again and would require medical attention the rest of her life. Friends of mine stated to me that this woman was walking around the house, and when I told the insurance company I could present witnesses to prove this, the company still refused to go to trial, and a settlement was finally made for \$500, which immediately satisfied all of us that the claims were fraudulent. When these cases come up and statements are made by a lawyer who knows they are not true, it seems to me that there should be some redress, something that would legally take care of a proposition of this kind. I think it should be legally impossible for a lawyer to file a fraudulent claim when he knows that his statements are absolutely untrue. There were medical experts willing to appear for this woman. The argument of the legal profession is, that it is up to the lawyer to prove his case. If he proves it he wins; if he fails, he loses out. But too often the case is fraudulent.

There is another type of medical expert, the man who is connected with a hospital and takes advantage of that fact to look through the records of accident cases. I know of one case in particular where a physician was the examiner for a corporation, and would use the hospital records to the advantage of his company. The executive committee of that hospital had their attention called to it and this physician was told that it was not an ethical procedure and if he continued to follow that custom he would be dropped from the staff. No further trouble ensued.

I have another professional medical expert in mind: A certain woman who tripped on a board walk in a Jersey seaside resort and was thrown forward on her face, claimed that she had sustained a backward displacement of the uterus. She had not been previously examined but the medical expert testified that this did happen. Within a few months subsequent to that trial this same medical expert was called in a case to give rebuttal evidence for a woman who brought suit claiming that she had sustained a backward displacement of the uterus by being thrown backward on her buttocks. He testified in this instance that a woman who was heavily thrown backward could not possibly sustain a backward displacement of the uterus.

Our profession feels very strongly about this unfortunate situation but we are simply powerless to do anything to help correct it. In June, 1927, the American Psychiatric Association adopted the report of a committee appointed from that association to study the whole problem of crime and

delinquency. The committee recommended that the association pursue the following program: (1) It should cooperate with the National Research Council, with the National Committee for Mental Hygiene, the American Medical Association, the American Bar Association, the American Orthopsychiatric Association, and with the American Institute for Criminal Law and Criminology, in further work on this program. (2) It should set up, agree and publish official standards, qualifications for court psychiatrists and psychiatric expert witnesses and cooperate with the American Psychologic Association and the American Association of Psychiatric Social Workers in the preparation of similar official standards of qualifications for psychologists attached to court psychiatric clinics.

That the Association should advocate: (1) Types of legislation such as the recent Massachusetts enactment, and the expert testimony bill of the American Institute for Criminal Law, which put the psychiatrist in a position of counselling the legal authorities as to the disposal of social offenders, implying the development of the necessary machinery, court psychiatrist, etc.

(2) That following proposals of the American Institute for Criminal Law and Criminology with respect to trial procedure: That the disposition and treatment (including punishment) of all misdemeanants and felons, that is, the sentence imposed, be based upon a study of the individual offender, by properly qualified and impartial experts, cooperating with the courts.

(3) The court appointment from a qualified list of psychiatrists testifying in regard to mental status, mechanism and capabilities of a prisoner, with the opportunity for thorough psychiatric examination, using such aids as psychiatrists use in practice, clinics, hospitals, etc., with obligatory written reports and remuneration from public funds.

(4) Elimination of the use of the hypothetical question and the terms 'insane' and 'insanity' and 'lunacy' and the exemption of the psychiatrist from the necessity of pronouncing upon concepts of religious and legal traditions on which he has no authority or experience such as 'responsibility', 'punishment' and 'justice'.

(5) The teaching of courses in criminology in both law and medical schools by persons trained both in criminal law and criminal psychiatry.

I thought this might be of interest in this particular phase of the question on medical expert testimony.

We feel that if the State Bar Association and the State Medical Societies will get busy something may be done to help clean up some of these difficulties. The appointment of medical experts by the judges is not advisable. One physician who is fighting this professional medical expert group said he knew judges well enough to know that they would tend to appoint their own friends. One judge told me that he thought the judges already have too many duties and want no additional ones and he thought that in large centers it would impose so much additional work that the judges would prefer some other solution to the problem. In Philadelphia alone it is said there are about 10,000 accident cases a year that come to the courts, and it would mean that the judges would have to appoint a large number of men to examine these patients.

In the appointment of medical experts by the Legislature there is a danger of political factors

being involved. The county medical societies might recommend to the judges as experts men who are looked upon as qualified for this work but the county medical society might be put in a most embarrassing position. The expert should be an authority in his line of work; he should have hospital affiliations; preferably be a teacher in his specialty; and be above suspicion. (The general practitioner as a rule makes a poor witness.) There are physicians who are not connected with hospitals but who have the privilege of taking patients to the so-called "open hospital", which hospital may or may not have a visiting staff, and one who is qualifying as a medical expert may say that he is on the staff of such a hospital which in reality may have no staff. The judge may discount 50% of his testimony, but there should be some other method to combat this condition.

The hypothetical question is a delusion and a snare, for it is usually entirely too long and often includes contradictory statements to confuse the witness. The expert on the witness stand should state facts if possible and avoid the reason for having reached the facts, for it invariably permits of an argument or an opening for the lawyers to wrangle with the witness.

Cases should be refused on a contingent basis. The expert should charge and collect for his opinion. On a contingent basis the medical expert is bound to become a partisan.

Do not wrangle with the opposing attorney or lose temper. To testify as an expert is not undignified when approached in a dignified manner. A thorough knowledge of the subject is essential. When an expert knows that he is telling the truth, and knows his subject, he need not fear any lawyer. After all, expert testimony depends, I believe, upon the individual honesty of the expert. Under the most alluring conditions and trials held out to him he must learn to say, No!

If anything can come out of this conference today that we can carry back to our respective states to start some method of eliminating the dishonest medical expert, we will have accomplished a big thing not only in medicine but in law.

Dr. George H. Lathrope, Newark, N. J.: During the last 3 months, since I have been the Chairman of the Committee on Expert Testimony of the New Jersey Medical Society, I have been looking up everything I could find on this subject and I must say that I have not heard as clear and understandable a presentation of the whole thing as has been given by Mr. Stryker here today. It is exceedingly comprehensive and covers all of the important points so far as I have been able to make them out.

Now, Mr. Stryker has well said that there is no absolute remedy, no ideal remedy, for the situation. The subject is confused and tangled up with all sorts of desires on the part of various conflicting interests. We as medical men have very definite ideas regarding the stigma which is attached to our profession and we want some remedy for it. We do not much care what the remedy is, but would like relief from what seems to us an impossible situation. We are up against the fact that the legal profession should feel the same thing attached to themselves, yet it is their machinery that has to be followed. It is all very well for us to offer plans but it is the legal machinery that will have to be changed. The medical profession is an old and conservative one, as is the legal profession, and I think Mr. Stryker has given their attitude very well in the conclusions

which he has drawn. He thinks that the long established precedent of the law is something that should not be lightly thrown aside. His criticism of the American Medical Association's resolutions in Texas, in 1926, is exceedingly good from a strictly legal point of view, but his criticism begs the issue of a remedy.

I do not agree with Mr. Stryker at all on the matter of the hypothetic question, but, of course, his standpoint again is the legal one. Most of us feel that the hypothetic question is complex and confused, that it lends itself to chicanery on the part of both lawyer and doctor, and that it is utterly unscientific and has no place in a discussion where one is trying really to arrive at facts. What the remedy for that is, how to adjust it, I confess I do not know but I do think that something should be done about it. I wondered as I sat listening to Mr. Stryker whether some of the difficulties might be overcome if expert testimony were taken out of the trial proper and offered before a special jury of men drawn from the same rank as your expert. If it is an engineering problem, have half a dozen engineers as a special jury. Of course, that would lengthen the trial; but permitting an often exceedingly ignorant group of jurymen, or whose intelligence is not above the average, the opportunity to decide what is and what is not correct on highly technical questions is, I think, wrong; because those things can seldom be reduced to such terms that a jury can readily understand them.

Mr. Stryker made one suggestion that interests me very much, and that is that we should deal with this problem through a code of ethics. I do not believe we can do anything strictly through the code of ethics. The code of ethics is nothing but telling a man how to behave himself like a gentleman. If he knows that in the beginning, well and good; if not, all your code of ethics cannot make much difference and I do not see how we would accomplish much by simply adding another rule. However, what the medical society in Leeds, England, has done about this is tremendously interesting. A number of years ago they got together and agreed that they would not go on the stand as experts unless they were permitted beforehand to confer with the experts on the other side. That was very simple. It is an agreement between the medical men in the Medical Society of Leeds and, as I understand it, they feel that it has worked out very well. When I received notice of this meeting I wrote over there in an effort to get some information regarding it. Unfortunately, I have had no reply as yet, but I believe it has certain suggestions in it which are worth thinking over, and which we as medical men, operating purely through our own machinery, can perhaps apply in our own various localities. It might be put into effect in any country and tried out.

From my point of view there are just a few things which stand out very clearly in regard to this subject. In the first place, reduced to its simplest terms, the question to be answered is: how to put on the stand witnesses whose testimony shall be an unbiased opinion as far as possible. That seems to be the crux of the whole situation. We have not ideal conditions. All medical men are not honest, unfortunately; all lawyers are not honest; all judges are not competent; all juries are not intelligent. It is one of those difficult efforts to create a fool-proof bit of machinery.

Of the various types of remedies, just a little can be said fairly definitely. Suppose, as has been

suggested, we retain the present system, but have the fees fixed by the court for all experts; have a certain maximum which no expert witnesses can go beyond without penalty for misdemeanor or contempt of court. That would seem to remove one thing right away, the temptation of large fees; and yet that is impracticable because subterfuge would be an easy matter.

The employment of only experts appointed by the court, as Mr. Stryker has already pointed out, would be unsatisfactory because it denies the right of the litigant to produce his own witnesses. It seems then that the only logical recourse is to the selection of witnesses appointed by the court *in addition* to those who are appointed by the counsel on the opposing sides. The fee of such witnesses should be fixed by the court and charged either to public funds or apportioned in civil cases between the litigants. Now the great advantage of that from the standpoint of my original question is that it brings on the stand witnesses who are *free from the suspicion of bias*.

After all we have heard this morning and probably the way we all feel, I do not think we have to argue the question at all of the position in which any man is put who is employed as an expert witness. He is a subject of suspicion right away in the eyes of the general public. Michigan passed such a law not long ago, it was put on the statute books, and the Michigan Supreme Court, on the first case tried on that basis, declared the law unconstitutional because, as I gather from reading the opinion, it gave undue weight to the witnesses produced by the court and prejudiced the jury in favor of the court's witnesses and against the witnesses produced by the litigants. The court said that was an unfair thing. I cannot talk in legal terms but I do not believe that is a sound decision because it acknowledges the fact that the litigants' witnesses are subject to suspicion. If they are, we should bring on some who are not. That is the only definite objection that I have come across so far in regard to that particular point.

The situation in New Jersey is very much up in the air, as it is in a great many places. Two years ago a committee from the State Medical Society and State Bar Association agreed upon a law which was finally introduced into the Legislature and defeated. I am very glad to say that the present committee from the Bar Association is very anxious to do something about the question, and I have been several times in conference with Judge Dungan, the chairman of that committee, and he is today reporting to the New Jersey Bar Association and recommending that their legislative committee prepare a Bill providing for the appointment of expert witnesses by the court in both civil and criminal courts. Both Bar and Medical Associations in New Jersey seem anxious and ready to cooperate, and it should result in productive action.

Dr. Arthur C. Morgan, Philadelphia: Sometime ago I happened to appear in a compensation case in Philadelphia. A chronic professional expert testifier was on the opposite side. His lawyer said, "Doctor, you are an authority on this subject?" He very quietly said: "I have written several papers on this subject." He evaded the question which, of course, on cross examination would have had to be answered—"yes", or "no", unequivocally. He had stated the truth but not the whole truth, because the general consensus of opinion of people who know this doctor is that he does not know what he is talking or writing

about, yet he was well within the limits of his oath.

The professional expert witness is the point of contention with us. It is conceded by the legal and medical professions that there should be expert testimony adduced in many if not most of our cases but there should always be uppermost in the minds of both sides an attempt to arrive at the truth and the facts in the case, and to strip the case of all the useless things that hinder the end or object to be attained. It has been my pleasure to meet some judges who have gone by a few straight questions to the truth of the matter. They have in a nice way discounted the professional expert testifier. They have confuted the crooked lawyer. Both professions work hand in hand. We have names, which we do not need to give but the facts are apparent. Despite the statement made in that wonderful paper by Mr. Stryker, I feel that a judge really possesses morally the right to hold in check both sides in the game, the lawyer who oversteps the bounds of justice and equity, and the doctor who shows himself to be venal and crooked; I feel the judge has it within his power to hold those men within bounds and in legal procedure and legal phraseology to see that justice and equity are accorded in every given case.

I feel that the teachers in the medical colleges have a moral duty to perform, not alone in teaching medical jurisprudence, but every teacher of every subject should have occasion to refer to this matter of medical expert testimony and make clear the duty of the physician when he gets into active practice to observe the example and precept that should be set by the teacher. Dr. Hammond happens to be a teacher of gynecology and I know personally that he does refer to this in his teaching. Likewise all teachers should drive the lesson home, showing that it finally pays to play the game squarely. A doctor who has a sense of decency should decline to associate himself with certain cases. In Philadelphia, if a certain few doctors are known to be engaged on a case there are many physicians who refuse to appear in the same case. The same is true of lawyers. The very fact that they are engaged on a case presupposes that there is something crooked.

I have been interested in making newspaper clippings for a young friend of mine who is a teacher in the University of Nebraska. I have noticed within the past year many references to cases of amnesia. A few days ago I learned that there are a number of crooked lawyers and doctors who are training their witnesses to fake amnesia. You will remember the traumatic spine that was to the forefront some years ago and if you will watch the newspaper items you will find that the word amnesia comes into play with more frequency than it did in the past.

I also have a brief against the bad lawyer for the public companies. Having been a railroad employee for a decade I dare speak on this subject and it is this thought that I have in mind: that the lawyer for the insurance company, for the railroad company, or for any industrial corporation has to keep his job and deliver the goods. The doctor who works for any industrial establishment likewise is under duress to do the same. Results count in one way only, the saving of dollars and cents or the making of dollars and cents for his employer. I have heard doctors and lawyers testify in medical cases for some of these industrial companies and they have allowed their answers to be absurd because of their attitude toward the case. One illustration may suffice: Some

months ago in traveling through Pennsylvania it was my privilege to hear of a case that was up for trial in connection with one of the large insurance companies of the country. It was a compensation case and there was no doubt as to the man having died because of the injury sustained. The question was as to the amount of damages to be awarded to the widow and her numerous children. The doctors had testified in splendid manner. The lawyer for the insurance company asked a couple of questions and finally confused a young doctor, who has splendid morals but who was disconcerted by the rapid fire questions. Finally, he introduced the word hernia and with a leering wink at the compensation referee, he betrayed the point of attack which lowered that lawyer to zero in my estimation. He is a brilliant lawyer, highly qualified in legal matters, but lacking in morals. I am not trying to paint the doctor but am simply giving a phase of human nature that belongs to both sides of the case. Fortunately the case was decided in favor of the woman and she was allowed the maximum amount by the compensation referee.

There is enough law for us to be governed by if we will, but the crux of the situation was summarized by the reader of the paper—conscience. Therefore, it becomes an individual proposition with you and with me as to whether or not we possess conscience and whether or not we are alive to that which we know can determine what is justice and what is equity.

Dr. J. B. Morrison, Newark, N. J.: I have been very deeply impressed indeed by Mr. Stryker's able address and only regret that I had not a copy of it to study more closely before making any remarks. It so ably approaches every avenue connected with expert testimony that it is difficult offhand to stress many points, but there are 2 or 3 of which I wish to speak.

When Mr. Stryker quotes Judge Bartlett, whose standing in the Bar is unquestionable, as laying the entire burden upon the medical profession for raising the moral and ethical standards so that it would be impossible for any physician to give testimony in the courts such as we are accustomed to hear, we acknowledge that he is all right theoretically, but it is absolutely impossible for the medical profession in this or any other country to set up an absolute standard of morality and conscience on the part of any physician. Unfortunately, there have crept into the medical profession in the last 20 years men who have not any conception of what morality means. They are unmoral, to begin with, but they are able to qualify and pass high marks in the profession of medicine and we are compelled to accept them. These are the men who prove so derogative to our medical profession. We might set up an ethical standard accepted by organized medicine, but Mr. Stryker and Judge Bartlett must recognize the fact that organized medicine comprises only about half of the medical fraternity. In the state of New Jersey we have 2400 members in the Society, but there are 6000 physicians in the state and the medical profession, through organized medicine, can never control those who are not in our membership. There are 96,000 members in the American Medical Association but 150,000 men in the United States who are practicing medicine. It would be impossible for us to set up a standard in ethics that by compulsion would keep these men from testifying in court, so that while that is very fine in theory it is absolutely impractical.

I was also impressed by the fact that Judge

Bartlett did not say that it was equally incumbent upon the legal profession to establish just as high a standard of ethics that would keep out of the courts some of the miserable lawyers we see there who are given the power to carry on their crooked work without any remedy applied by the Bar Association to drive those men out of their ranks. I think that the method of cross examination should be regulated in some way so that the nasty insinuating phrases, retorts, wit, and questionable methods of undermining a witness, and efforts to confuse him, should not be permitted by the court. It seems to me damnable that a lawyer can attempt to upset a witness so that he cannot properly testify. I also believe that the courts should, by law, be qualified to determine the abilities of every expert witness. How many times does a judge question a physician on the stand along definite lines so that the court may show whether he is qualified to testify, what his ability, education and practice have been, whether he has given any special study to a subject to enable him to testify on a certain procedure? There is nothing in law that gives the court the right to determine these qualifications and if such a thing could be brought about it might have a far reaching effect.

A little while ago I read a copy of the California law adopted in 1925. For 16 years the medical profession and the Bar Association there had been working for the adoption of some legal method to control expert testimony and finally they had a bill drawn up which contains almost verbatim the recommendations from the New Jersey Bar Association. It does not take away from the plaintiff the right to produce his own witnesses, which is a right given by law. It gives the court the power, on motion of the court or plaintiff or judge, to obtain expert medical testimony. Then the litigant is allowed to produce his own expert medical testimony. The compensation in criminal cases is fixed by the court and is charged against the Treasury of the County and the law provides for this payment. The charge in civil cases is arranged by law so that it falls upon the litigant. There is this additional point that seems to me to be of considerable importance, that the expert appointed by the court is given a remuneration that the court considers reasonable. A man of international standing might be given \$1000, a man of local standing might be given \$100 for his testimony, but the man who is not appointed by the court is given only the average witness fees and provision is made against accepting any more than that. Whether or not this is an ideal solution I do not know. I do not believe that the time is ripe to put across legislation that will govern this condition. There is a great deal to be done in cleaning our ranks in the medical profession and there is just as much, if not more, to be done in the legal profession before we can adopt any legislation that will be beneficial.

Dr. H. W. Albertson, Scranton, Penna.: Most of you who know me know that I have never yet suffered from amnesia, particularly when a subject of this type is being discussed in which the medical profession is so much concerned. First, I want to compliment the essayist of the morning on his very excellent exposé of the subject matter. He has covered it so thoroughly that if one were to accept in toto his court records that he presents as matters of fact there would be nothing left to discuss. There are, however, differences of opinion on this particular subject. In the first place, there are certain foundations in fact in every legal question and the thing that should be considered is the foundation in fact. There should be

less quibbling on the part of jurists and more frankness on the part of witnesses. Revival and revolution in the past have accomplished a great deal. Revival and revolution will probably be the outcome for ultimate success in this particular endeavor to correct the very great evil of medical expert testimony. It seems to me that there is within our ranks, as there should be within the ranks of the legal profession, a means of very largely eliminating this serious difficulty. My suggestion for the alleviation of this trouble is that the highest tribunal of each individual state society should appoint certain men in certain districts of the state to be the outstanding figures in certain types of cases, legal entanglements, which may necessitate medical expert testimony. I mean that there should be men appointed as neurologists, whose opinion would be a God-fearing, honestly given opinion, whether upon the part of the state or of the individual seeking medical expert testimony. Naturally a neurologist might not be the type of man required in a compensation case and another man might be selected in a given territory for that. The legal profession, however, is hampered as we are by the fact that lawyers must make a living, but there should be some method of censure of members of the bar who handle cases purely on the grounds of remuneration. Some such censorship of that class of individuals in the legal as well as in the medical profession would in a great measure straighten out this very serious proposition.

Many of the decisions that have been cited this morning were rendered in the early days of the medical profession when the scientific methods of today were not in use for reaching conclusions. It is true that medicine has not been a fixed science, that we are gradually working toward a better understanding of many things, and that today we are able to go before the bar of justice and give more intelligent testimony than it has been possible to do heretofore, but there are still many things we must get from this revolution in order to improve the condition which exists. After all, the point has been very aptly stressed this morning in saying that conscience on the part of both the legal and medical profession is the one great solution to this very important problem.

Dr. Walt P. Conaway, Atlantic City: I think the subject we have for consideration today is equally as important as anything we have discussed at any of our previous meetings. It is undoubtedly true that there is a rapidly growing tendency on the part of physicians in general, as well as the public, to discount the value of medical expert testimony. No distinction is made between a qualified and an unqualified expert when considering his testimony and all seem to be equally denounced as dishonest and unscrupulous. If murder trials are to continue and if expert medical testimony is deemed necessary, then something more must be done promptly to correct existing abuses in respect to the present methods of presenting medical expert testimony or it will soon be considered valueless.

About a year ago the Cleveland Bar Association considered this matter by a special committee acting in conjunction with a committee from the Academy of Medicine of that city. The central idea in all the measures proposed by these committees seemed to be the advisability of giving the judge power to appoint one or more disinterested qualified experts, not exceeding 3, to testify as experts; the fees of such witnesses to be fixed by the court and paid by the county.

Several years ago, the late Dr. Carlos F. Mac-

Donald suggested that the medical profession, instead of condemning all medical experts, should fix a standard of qualification, based on special study and experience in a particular branch of medicine, which shall entitle a member to rank as an expert in that branch, and at the same time put its seal of disapproval and condemnation on the practice, which now too frequently obtains, of physicians posing as experts on subjects respecting which they have no special knowledge or experience.

I hope, as a result of this conference today, that a committee will be appointed with representation from each of the 3 states to cooperate with a committee from the Bar Association of the same states relative to devising plans for relief of this unfortunate and regrettable condition by some constructive legislative measures. I can say for the New Jersey Medical Society that we are quite willing to cooperate in any possible manner.

Dr. George M. Fisher, Utica, N. Y.: I want to say, in the first place, that I congratulate our legal representative and I want to have the privilege of studying more carefully many of the suggestions that he has made in his conclusions. It seems to me that we have come to one conclusion and that is that the old adage regarding the lawyer, that he lies on one side and then turns over and lies on the other, is not alone applicable to the legal profession. There are many men in our own profession who work along the line of least resistance and that applies many times to the expert witness.

I was pleased at one remark—that there should be some instruction in medical jurisprudence given to the undergraduate. That may be of some value but it will not control all men. Yet, perhaps starting a right purpose in youth may lead to a right destiny. I might say that in 1 or 2 instances which have occurred in our county, the local experts were not members of the county society. I have reference to one man who was a member but who resigned. There is another man who is always on the stand and who was recently discredited, and fined \$5000 in a suit against him.

Dr. Arthur W. Booth, Elmira, N. Y.: I have had the misfortune to be a professional expert for the last 30 years; not an unprofessional one, however. It so happens that I am physician to several railroads and large corporations, along with my other surgical work. My rôle has been that of a defendant expert. I have seen written into the verdicts or brought into the records of the courts during the last 25 years the most bizarre lot of pathology and medicine that can ever be conceived of, through the jumbled evidence adduced by the plaintiff attorneys. I have thought long and seriously on this matter and am very much impressed by the remarks of Dr. Lathrope, of New Jersey, concerning the system in vogue in Leeds, England. For several years, whenever prudent, I have personally gone to the attorneys on both sides and said: "Now, you want to get the truth of this, then appoint a man, let the other side do the same thing, and let another man be appointed by the first two, so that we may get together, lay the cards on the table and tell the medical truth in the case." In some cases it has worked very beneficially. We cannot legislate conscience into people but we can appeal to the pride of every physician. No physician can stand before two of his colleagues and present an outrageous dictum or theory about his patient. I really believe that it would help in the solution of this problem to have, as Dr. Albertson suggested, outstanding individuals in our profession who

might be called upon according to the character of the case, whether gynecologic, surgical or medical, letting the plaintiff and defendant each select one man. Those 3 doctors should have access to all the medical facts of the case and I think they could arrive at an honest survey and give an honest opinion to the court.

Dr. Harry R. Trick, Buffalo: I had no intention of taking part in the conversation but I have enjoyed listening to the paper and discussion and have been much enlightened. I have been impressed by the fact that most of us have held the same ideas which Mr. Stryker has called to our attention and which he has shown generally were not workable. The fact is very evident that this is largely a question of morals. Men of good morals are not likely to be a party to questionable practice either legal or medical. I believe that there is much good work being done in the selection of candidates for our medical schools. For the past several years the various schools have had such an abundance of applicants that they have been obliged to select men for students in medicine with higher qualifications and it may be that this will be reflected in the higher moral standing of our graduates.

It also occurred to me that we may, as a society, inadvertently have done something that will tend to improve the situation in this state. I am referring to the recent work of the Committee on Medical Economics in conference with the various groups of industrial, labor and insurance companies in trying to modify the Workmen's Compensation law. Part of this proposed Bill includes the Medical Advisory Council which will pass an opinion on medical facts in regard to cases that come under that particular division. That conforms in some respect to many of the ideas suggested here in other cases. Of course, that is limited to the Workmen's Compensation law, but it may be that it will give us an idea that we may develop further in other cases.

Dr. James E. Sadlier, Poughkeepsie, N. Y.: Referring to the suggestion of Dr. Trick, relating to the present work of our Committee on Medical Economics that is drafting a Bill to be presented to the Legislature with the sanction of the Industrial Service Commission of the state, and which designates a Medical Advisory Commission with voice but without vote to confer upon questions relating to compensation cases, we regard this as a very constructive piece of work which may help to solve some of the differences now existing between medical men and the insurance carriers of compensation liability. Properly constructed committees do work and get something done. I recall a conference held about 2 weeks ago, resulting from a thought which had been in our minds for a year or more, that the undergraduate medical students were not being sufficiently taught in the subjects of preventive medicine and public health and were not going out with correct ideas and sufficient knowledge upon those subjects. At a dinner meeting recently held in New York City we had the Deans of the various medical schools in the state of New York, a fairly representative group of the leaders in the medical profession, and the members from the Department of Education. We had a general round table discussion on the education of the undergraduate in public health. I think all of us went away that night with quite a different view point, and were impressed that considerable was being done in teaching public health and prevention of disease but that perhaps it might be carried to even a greater extent. We were impressed with

the fact that the colleges were doing a great deal. The thought has been expressed here today that this subject should be accentuated a little more and I agree with Dr. Trick that the candidate to study medicine is being considered most carefully and is quite a picked person at the present time. If we can throw a little force into the teaching of this question of medical expert testimony we will have accomplished something.

I wish Dr. Conaway would offer his suggestion as a resolution.

Dr. Daniel S. Dougherty, New York City: I would like to refer to the subject of having the Council in New York State select a certain number of men who might act as experts. You could not do a more damaging thing to organize medicine in New York State than to do a thing of that kind. Take neurology; in the state of New York there is no outstanding man in that line. I could select 2 or 3 out of the dozens but not without hurting the other men. In our own Council we have two who hold professorships in my specialty. I don't think we would be considered outstanding men. Although I hold a professorship and am an attendant to 2 hospitals and consultant in 5, I would not be looked upon in any other way than as the Secretary of the State Medical Society, and there would be a great deal of justice in that.

The ophthalmologists and we otolaryngologists have for sometime been trying to make certified specialists a nation-wide matter. In the American Board of Ophthalmology and the American Board of Otolaryngology, there were a number of us who on our records and standing were invited to become members, all others coming in on their record and examination. When a man can prove that he has been certified by such an American Board he might qualify as an expert from a practical standpoint, but a man on the stand must have a quickness of comprehension and an understanding of court procedures. I have been on the stand and asked a hypothetic question quite long. The judge said: "Let me simplify this, Doctor. Could this have been a condition resulting from childhood due to some disease?" That was the whole meaning of the hypothetic question which I could not understand and would have had to take home to study. I think a great deal of medical testimony is based on efforts of the lawyers to bewilder the medical man. I make it a rule, when asked to recommend expert witnesses, to reply that it is not within the prerogatives of the medical society to recommend or condemn physicians. In New York County I merely say that if they will write to the Academy of Medicine they can secure a list of the gentlemen belonging to that section. If the men of real standing could be selected it would carry weight with the judge and jury and I think a witness should remember the responsibility not only of the undertaking but the responsibility of upholding the dignity of the profession.

Mr. Lloyd Paul Stryker, New York City (closing): I have been much interested by everything that has been said in this discussion. This subject really goes to fundamental principles and the one thought that emerges prominently is the important need at this time in both professions of a better class of men. When one devises a system by which that can be achieved, practically all of these troubles will be solved. Of course, I speak largely from a New York City view point, but as I see it the difficulty is primarily that there are seeping into our life from abroad persons with different racial strains and historic backgrounds,

men who are going into the professions who simply do not have the standards and points of view of the American and Anglo-Saxon as to what is right and wrong. My experience has been that doctors and lawyers who have been educated to the right standards and have the right concepts will cause no trouble. Perhaps the reason why they have a better English Bar than our American Bar is because it is recruited from homogeneous people with similar traditions and background. But when you have to debate fundamental principles as to whether something is wrong or not, the only solution is to have the man born anew. That is a difficult thing in this country, especially in large centers. This is a democracy. People come here and become citizens. It is a fine theory but sometimes it does not work out so well, particularly in our profession where conscience is the prime essential.

This brings me to another subject which I dare not even open, that is the question of individualism in the professions. I have heard a good deal of talk about "State Medicine" and I see the same trend in the legal profession, to group the individual, to incorporate him, to break down his individual conscience and personality, and if I am the last man who stands up for the individualism of both professions I will be there. There are some large law firms in this town which haven't a man in the whole outfit that can go into court and champion a case. It is the trend of the age to group people, to subordinate the individual. I believe when you take away the individual concept, all the hardships of years of work for the opportunity to stand out and be a worthwhile man in your profession, much is lost and the individual counts for nothing. I am against any kind of legislation that tends to subordinate the individual. We must take hold of these things ourselves in order to correct the evils that exist in our professions. One of the trends of this country today is to rush to the Legislature or to Congress to correct everything. The correction of all the evils of today are based on that theory, the thought that you can legislate temperance into the country for example. I think there is a substantial unanimity of opinion on fundamental principles. We all admit there are great evils in expert testimony and we all admit that something should be done to rectify them. We should be in substantial accord as to what is the best remedy to meet these existing evils. Is it legislation, or is it not? We should try to solve this before somebody else does.

The hypothetic question is debatable. I approach this from a highly practical standpoint, from being almost every day in court with hypothetic questions. I think some of the criticisms come from gentlemen who perhaps do not quite grasp the idea that the case involves an issue, for instance whether the doctor treated the leg properly or not, a solution of which depends on many questions. Every time a case is in court half my problem and worry is the importunities of my witnesses, how can they get there quickly, not be detained, etc. It might be a fine thing theoretically to have a lot of experts and have a discussion beforehand, but from the standpoint of a great city like this you have a practical situation, a busy life, and you have to accommodate yourself to modern times. If you have an interlocutory trial you tie up the case with motions and appeals from motions. There may be 15 of the patient's family and friends who will testify that the doctor did not wash his hands, or some other fact, to show that

aseptic precautions were not followed. The only thing you can do is to seek an opinion predicated upon the facts of the case.

There has been one suggestion made by Dr. Dougherty that I wish I had in my power for it is a very important and practical matter. It would be a splendid thing if the public might have certain men in the various branches of medicine that could be officially certified as being experts in a particular specialty. We know how some men today become plastic surgeons, for instance. A man takes a trip over to Vienna, has a 3 months' course and comes back practicing as a plastic surgeon. The worthwhile specialists of various kinds would welcome certification by a Board of Regents. If such a system were in vogue so that there would be qualified, recognized experts in the various branches of medicine, it would be easy to find the right expert witnesses in a given case.

My suggestion would be, if Dr. Sadlier agrees, to appoint a committee to consider this whole question. I respect the courts and the judges and what I am saying is not in derogation of our judicial system, but appointments by the courts for the most part are made on political considerations. It is seldom that you find a good Democratic judge appointing a Republican referee or receiver. I am not saying that they appoint unfit men but the political question does enter. How are the vast army of appointees selected? We are getting very good men, but are we getting the best men in the profession in those particular offices? From some experience in politics and as, I hope, an intelligent observer I have not much faith in the sanity of official appointments in this country. It seems to be admitted by the American Medical Association's Bill, based on your Michigan case, that there is a constitutional objection in saying that you can have only court appointees. My objection to this whole proposition is that we would not have an opportunity to bring the true medical facts before the court.

I will say that I believe in New York City there is more constructive active work done to rid this community of crooked lawyers than in any other place in the world. The New York Bar Association is on the job all the time. There is the Grievance Committee in the New York State Medical Society which is developing and growing. I would like to see you make some practical solution that would really better conditions in the courts and would also tend to remove the criticism that you are not doing anything in this line.

Dr. Hammond: I move that a vote of thanks be extended to Mr. Stryker for his splendid paper. This motion was duly seconded, and unanimously carried.

Motion was made by Dr. Hammond, seconded and carried, that the best wishes of the Conference be sent to Drs. Reik and Lawrence, who were absent on account of illness.

An invitation was extended, by Drs. Morgan and Hammond, to hold the next session of the Tri-state Conference in Pennsylvania, the time and place to be determined later. The invitation was accepted by Dr. Sadlier.

Dr. Conaway made a motion that the Presidents of each of the 3 State Medical Societies appoint one physician member of a committee, and a similar lawyer member from the Bar Association of the 3 states, to devise ways and means to alleviate existing conditions in regard to expert medical testimony. This motion was duly seconded and adopted.

Dr. Sadlier: At the last meeting held at Atlantic City there was a most instructive session on the question of the "private hospital" and the appointment of a committee at that time was suggested with reference to studying some method or plan for state licensure of the private hospital of the future. New York State after some delay, for which I was responsible because I was particularly anxious to secure one particular man, appointed Dr. Martin Tinker; Dr. Morrison was appointed for New Jersey; and Dr. Albertson for Pennsylvania.

Dr. Morrison: Speaking in regard to private hospital control, as I was appointed chairman of that committee, the months of January and February take up more of my time than any others and I have not been able to get the committee together yet to give the subject the consideration it deserves. I had a letter from Commissioner Ellis in regard to the Bill I spoke of last year. We have a law in New Jersey controlling Nursing Homes and he suggests that it is much easier to amend a law than to enact new legislation and proposes to the men in New Jersey an amendment providing that a Nursing Home shall be deemed any place where 2 or more patients, not relatives of the owners nor of the lessee, are treated for more than 6 hours. That will cover all private hospitals.

There is another clause in the present law which exempts from control a Nursing Home having a medical staff. He wants that stricken out. He suggests putting a penalty clause in the Act. I have asked them to hold it so that the 3 states may submit their Bills at the same time.

I would suggest that each man's remarks be submitted to him for correction before publication, and I put this in the form of a motion.

This was seconded and carried.

Adjournment at 2.15 p. m.

The Woman's Auxiliary

Before presenting the county organization reports we would direct your attention to a letter published in the Department of "Communications", under the title—"Why an Auxiliary?" Mrs. Taneyhill, our associate in the educational work of the State Society, has in addition to addressing a number of Women's Clubs and Parent Teacher Associations, appeared before 13 of the county society auxiliaries, and in this letter she presents some cogent reasons for the existence of auxiliary bodies and indicates how they may become invaluable adjuncts to the organized medical profession. Read her letter and see if you cannot therefrom extract some helpful hint for application to your own local organization.

Atlantic County

Mrs. Lawrence A. Wilson, Secretary
The Woman's Auxiliary to the Atlantic County Medical Society met at the home of Mrs. W. J. Carrington, 12 Somerset Avenue, Ventnor City, with 20 members present.

The meeting opened with each member telling a story, joke or personal experience in answer to the roll call.

Mrs. Beckwith, Chairman of the Welfare and Educational Committee, reported a "Musical Tea" to be given Saturday, March 17, at the

Woman's Club. Mrs. Taneyhill will give an address, "Prolonging Life". This Tea is being sponsored by the Auxiliary. Mrs. Taneyhill will also lecture to the Auxiliary of the Atlantic City Hospital sometime in April.

News of Mrs. C. B. Kaighn's illness, due to a minor operation, was received with deep regret. She is one of our most active members.

A communication from Mrs. Babcock was read and proved very encouraging and helpful.

After the routine business, and adjournment, we enjoyed a very pleasant evening at cards and games; after which the doctors joined us and delicious refreshments honoring St. Patrick were served.

The members who were guests of Dr. and Mrs. Carrington were: Mrs. Charles E. Ulmer, Dr. and Mrs. L. A. Wilson, Dr. and Mrs. F. Massey, Dr. and Mrs. William Gorson, Dr. and Mrs. Robert Bradley, Dr. and Mrs. John Beckwith, Dr. and Mrs. Samuel Barbash, Dr. and Mrs. Walter Stewart, Dr. and Mrs. E. H. Harvey, Dr. and Mrs. Milton Ireland, Mrs. Percy Joy, Dr. and Mrs. Samuel Winn, Dr. and Mrs. Daniel Reyner, Dr. and Mrs. Carl W. Surran, Dr. and Mrs. Morris Chesler, Dr. and Mrs. Blair Stewart, Dr. and Mrs. Robert Grier, and Dr. and Mrs. Walker.

Camden County

Reported by Mrs. Harold F. Westcott

On Friday, February 17, a Directors' meeting was held at the home of our State President, Mrs. A. Haines Lippincott, Mrs. Edward Pechin presiding. The meeting was for the purpose of arranging a bride party, to be given on February 27, at the Woman's Club, 524 Linden Street, Camden, N. J.

Mrs. A. H. Lippincott discussed the reduction of dues from \$5 to \$3.50 to include the Hygeia magazine. This met with the approval of the directors and was held over to be discussed and voted upon at the regular meeting in March.

Meetings throughout the year will be as follows: January and May will be held in the afternoon; March and October in the evening. The afternoon meetings will be social affairs and held in various places. The evening meetings will be held at the Camden City Dispensary.

The following Directors were present: Mesdames A. Haines Lippincott, Edward C. Pechin, O. W. Saunders, A. J. Casselman, Joel Fithian, William Raughley, Joseph Roberts, William Van Sciver and H. F. Westcott.

On Monday, February 27, the Auxiliary held a "Bridge Party" at the Woman's Club, 524 Linden Street, Camden. Mrs. O. W. Saunders acted as hostess and was assisted by Mrs. Joel Fithian and Mrs. A. J. Casselman. We feel that Mrs. Saunders was well pleased with the attendance, there being 37 members present.

Mrs. A. H. Lippincott gave a short talk on the object of the auxiliary, and explained just what assistance we might render to our county medical society.

We had a very pleasant afternoon, tea was served and prizes distributed.

The following members attended: From Camden: Mesdames O. W. Saunders, Joel Fithian, A. J. Casselman, A. Haines Lippincott, A. S. Ross, L. R. Wilson, R. P. Gamon, E. I. Deibert, R. E. Schall, Levi Hirst, Lincoln Sherk, W. H. Pratt, Thomas McConaghy, George P. Meyers,

E. G. Hummell, Oram R. Kline, Alexander McAlister, J. C. Levitt, E. W. Kauffman. From Haddonfield: Mesdames Edward C. Pechin, Joseph Roberts, E. Reed Hirst, Joseph Nicholson, David Bentley, William Kelchner. From Merchantville: Mrs. Thomas Kain and Mrs. Alfred Elwell. From Collingswood: Mrs. Edward B. Rogers and L. W. Madden. From Audubon: Mrs. G. I. Seiber and Mrs. Henry Decker. From Clementon: Mrs. Harold F. Westcott. From Berlin: Mrs. William A. Wescott and Mrs. William Raughley. From Atco: Mrs. Henry Schwartz. From Blackwood: Mrs. William Collier.

Cape May County

Reported by Mrs. A. C. Crowe

The regular meeting of the Woman's Auxiliary was held at the Ocean City Golf Club, February 28, and the following named officers were elected for the ensuing year: President, Mrs. Herschel Pettit; First Vice-President, Mrs. Frank Hughes; Second Vice-President, Mrs. John Whitaric; Secretary, Mrs. O. F. Ziegler; Treasurer, Mrs. John Townsend.

At the close of the business session, Dr. Henry O. Reik, Editor of the Journal of the Medical Society of New Jersey, addressed the meeting with reference to opportunities for work on the part of auxiliaries.

On February 7, the Auxiliary held a most successful luncheon at Cape May Court House; an exceptionally good attendance as well as an excellent meal. The gathering had a very happy feature in that Mrs. E. C. Taneyhill addressed us on "Diphtheria and its Prevention". We were delighted with Mrs. Taneyhill and grateful to the State Society for sending her to us. We do feel quite proud of the fact that we were able to have Mrs. Taneyhill reach between 400 and 500 other people in Wildwood that same day. Great credit belongs to our former President, Mrs. Dandois, for securing the privileges to address the North Wildwood High School, the Wildwood High School, and the Wildwood Kiwanis Club. We have heard that the Kiwanians were very much pleased with Mrs. Taneyhill's address and listened as never before to a health talk.

Our Auxiliary has appointed a woman in each town to try to induce the editors of local newspapers to reprint health articles from Hygeia; and it is reported they have already been successful with all but one of these papers and hope to capture it soon.

Finally, though we dislike to "toot our own horn" too loudly, we must boast of the fact that our Auxiliary has enrolled every eligible member in the county save only one. We are not going to be satisfied, like Ivory Soap, in being 99.4% pure, but intend to have that last possible member by the time we meet in May.

Essex County

Reported by Mrs. George A. Rogers

The Woman's Auxiliary of the Essex County Medical Society held a regular meeting on Monday, February 27. Routine business was conducted and the question as to how often the Auxiliary should meet was decided in favor of the monthly meeting.

A most interesting lecture on "Good Taste in the Home" was given by Miss Margaret R.

Thompson, Assistant Art Director of the Metropolitan Museum of New York. Through the courtesy of L. Bamberger and Company in lending materials for illustration, the audience was treated to a display of beautiful fabrics, napery and glassware, and was shown how, by the correct combinations, to produce an harmonious whole.

Such a subject always appeals to the home makers, so the members of the Auxiliary felt that they had spent a profitable as well as an enjoyable afternoon.

Hudson County

Reported by Mrs. Harry J. Perlberg

Members of the Woman's Auxiliary to the Hudson County Medical Society held their February meeting at the Carteret Club, Jersey City, Mrs. William Freile presiding. There was a marked increase in membership and attendance, also much interest was displayed in regard to the future plans of the organization.

It was voted that all forthcoming meetings should be held in the new Y. W. C. A. building, Fairmount Avenue, Jersey City.

Mrs. Freile read a report of the meeting of the State Executive Board held at Trenton, January 30.

After the usual routine business, a social hour was enjoyed at bridge, the winner at each table receiving a beautiful prize. Refreshments were served, and the meeting adjourned.

Union County

Reported by Mrs. Harry V. Hubbard

A delightful afternoon at cards was enjoyed by more than 50 members of the Woman's Auxiliary to the Union County Medical Society, at the residence of Mrs. Harry V. Hubbard, 121 East Seventh Street, Plainfield.

The meeting was given to introduce new members and to give the other members an opportunity to get better acquainted with each other.

Delegations were present from Elizabeth, Westfield, Cranford, Linden, Rahway and Dunellen. Eleven prizes were awarded; the first going to Mrs. Louis G. Newman, of Westfield. Mrs. William B. Fort was in charge of refreshments, assisted by Mrs. J. G. Boyes, Mrs. Staunton Davis and Mrs. H. D. Corbusier. Mrs. Ray Munger and Mrs. L. Y. Lippincott had charge of the tables. Mrs. P. B. Cregar had charge of the prizes.

Mrs. George L. Orton of Rahway, President-Elect of the State Auxiliary; and Mrs. F. A. Kinch, of Westfield, President of the Union County Auxiliary, were among those present.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M.D., Reporter

The regular monthly meeting of the Atlantic County Medical Society was called to order by the President, Dr. William C. Westcott, at 8:30 p. m., Friday evening, March 9, 1928, in the clinic room of the Atlantic City Hospital. The minutes of the previous meeting were read and approved.

The Secretary, Dr. Joseph H. Marcus, read a

letter from Dr. J. Liedman, asking that his membership be transferred from the Essex to the Atlantic County Medical Society.

Application was made by W. Singer, Ph. D., for associate membership. This application was referred to the Board of Censors.

It was moved and seconded that \$25 be given to the Boy Scouts of America, and motion was adopted.

Dr. W. J. Carrington reported that the American Medical Society no longer considered Dr. Wm. L. Coplin a member of this Society and that being an associate member in this Society would not entitle him to become a regular member elsewhere. This Society is going to investigate to see if there is a way in which this can be accomplished.

The scientific program consisted of a "Clinical Meeting" by the members of the Staff of the Atlantic City Hospital, as follows:

Surgical cases were presented by Dr. Theodore Sensemam.

(1) Goiter. P. S. 36, female, admitted Jan. 9, 1928, complaining of nervousness, shortness of breath and numbness.

Heart: Rapid, pulse 100, presystolic thrill at apex, double mitral lesion with marked hypertrophy. Basal metabolism plus 44; on Jan. 23, plus 49; Feb. 8, plus 28. A total thyroidectomy was done Feb. 22.

Patient was hoarse for 3 days, out of bed on the eleventh day with no change in the pulse rate which was now 84 and 80. Basal metabolism on March 7 was minus 22.

(2) Three cases of liver abscess.

(a) A. P. aged 41, colored, admitted to hospital complaining of a mass and pain in the upper left quadrant. Family history negative. Was born in South America and came to this country at the age of 6½ months. Otherwise negative history until 1925, at which time, 4 hours after a meal of cabbage, he had severe pain in the abdomen and desire for bowel movement; when bowels moved he noticed a mass protruding from his rectum, but it was easily reduced. From 1925 until the present illness, patient claims his bowels moved from 6 to 12 times daily. This began, as a rule, at 2 a. m. and lasted until 9; rarely any more until the evening. The movements contained bile and considerable mucus. During this period many physicians were consulted, with no relief. Stools were examined for ameba and tubercle bacilli; both were negative.

Two months before admission patient noticed a sense of uneasiness in left epigastric region; this continued for 3 weeks, when it became a definite pain and he noticed a slight swelling. Pain and tumor increased until admission.

Chest. Slight hoarseness, breath sounds prolonged expiration, no rales, no change in percussion noted.

Abdomen. A mass in the upper left quadrant underneath edge of ribs, the size of a small orange; tender and slight fluctuation; moved with a deep respiration.

Blood Count. R. B. C., 3,400,000; W. B. C., 22,700; hemoglobin, 75%; polys., 67%; small leukocytes, 32%; eosinophiles, 1%. Wassermann, negative.

Operation. Operation disclosed an abscess in the left lobe of the liver, which contained 12 to 14 oz. pus; all examinations of which proved negative. The liver was sutured to the abdominal

wall, peritoneal cavity closed, and abscess packed with iodoform gauze.

Progress. Patient is now convalescing, after running a septic temperature for about 10 days.

(b) L. W., 25, male, admitted December 14, 1926, complaining of recurrent fever, weakness and general malaise. Family history negative.

Past history: Negative except for immoderate use of alcohol at times and slight morning cough with scant expectoration. Chronic constipation for several years. Has not used alcohol for past 4 years.

Present illness: Began 4 weeks before admission, with loss of appetite; this continued for 2 weeks with slight malaise; then he had a chill and a fluctuating temperature. He had generalized aches and a feeling of gas in the abdomen. Responded to treatment and was out of bed in 5 days. While sitting in a draft, he began to have pains in both shoulders and his temperature went up to 100° F. Admitted to the hospital 4 weeks after onset of the chill, complaining of the same symptoms.

Chest: Impaired resonance at right apex down to spine of scapula posteriorly and second interspace anteriorly. Breath sounds tubular, distant, and few moist crepitant respiratory râles. All further examinations, including laboratory, were negative. Temperature ranged from 98 to 99.5°. Pulse 86 to 94. Impression—healed tuberculosis of right apex with an acute cold. After 2 days in the hospital with normal pulse and temperature, the symptoms having cleared up, patient was discharged against our wishes before a complete study had been made.

He was re-admitted March 23, 1927, from the Pine Rest Sanatorium, where he had been sent because of suspicious signs. This time he complained of severe pain in upper left quadrant intermittent in character. This began 2 weeks before with a sudden sharp pain, continuous, with acute exacerbations. The pain was localized with occasional radiation to the back. No nausea, vomited twice. The pain at times would require morphia for relief.

Chest: Same pulmonary findings as before.

Abdomen. Marked tenderness, intermittent rigidity in upper left quadrant along the border of the ribs and in left epigastric region. No masses felt. Temperature on admission was 97.3°, pulse 84. Eight hours after admission temperature was 104.1° with pulse 120.

Blood count on admission: W. B. C., 16,500; polys., 88; small, 7; large, 5.

The next day blood count showed: R. B. C., 2,740,000. W. B. C., 21,900; Hb., 40%; polys., 88; small, 9; large, 1; eosinophiles, 1. Blood culture: no growth in 5 days.

Operation: Patient was operated upon March 25, 1927, two days after admission, and was found to have multiple abscesses in the left lobe of the liver, which was adherent to the parietal peritoneal wall and diaphragm. A rubber tube was placed in the liver, and 2 cigaret drains in the abdomen. It was necessary to resect a portion of the tenth rib on the left side to reach the abscessed cavity and get proper drainage. Following this, the patient had a very stormy recovery. At times his temperature was as low as 96.1° with a pulse of 160. At other times it would be 103.4° with a pulse of 118. Between these points it fluctuated until April 22, one month after admission, when it made a sudden drop and never reached above 100° afterward. From this date

until his discharge on May 23 the tendency was from subnormal temperature to 99° with a pulse of 98 to 124.

Just 6 days before discharge he ran a subnormal temperature of 96° to 98° for 5 days with a pulse of 120. He was discharged on May 23 to return to the dispensary for dressings, very much improved. On April 9 an x-ray of the liver showed shadow of the lower left lobe extending about 3 in. to the left of the spine.

The man today holds a position in the Atlantic City Fire Department.

(c) A. B., aged 29, female, white, admitted to the hospital Feb. 6, 1928, complaining of pain in the upper left quadrant, lower left chest, and severe cough.

Past history: Ruptured gangrenous appendix 15 yr. ago; 3 yr. ago bilateral salpingectomy for Neisserian pyosalpinx.

Patient said she would at times have dull achy pains in upper abdomen following operation 3 years ago; the lump found on present admission had been present since that operation, but physician who was consulted said it was gas.

Present illness: Began Feb. 5, 1928, with sudden sharp pain. Nausea and severe coughing spells; pain continued through the night and the next day, until the time of admission. Several of these attacks during the past 5 or 6 months, but they were only slight in character.

Chest: Limited expansion, dullness of percussion, absent breath sounds, from the spine of the scapulae downward on the left side. Same signs present in the axilla and anteriorly on the left side of the chest.

Abdomen: Large mass in upper left quadrant underneath the ribs, extending from midline to the anterior axillary line along border of the ribs. Tender but no fluctuation. Fluoroscopic examination: diaphragm 2 in. higher on the left than on the right; subdiaphragmatic mass fluctuating on abdominal pressure. Blood count on night of admission: R. B. C., 4,290,000; W. B. C., 7,550; hemoglobin, 72%; polys., 71%; small, 10; large, 16; transitional, 3. Culture: negative.

Operation on Feb. 8, 1928. Examination of the discharge revealed a large amount of blood; no bile; no urinary constituent. Since operation the patient has had profuse drainage; temperature ranging from 98.4° to 103.4°; pulse 84 to 116; at times severe attacks of coughing. Successive examinations of discharge revealed nothing but blood and various bacteria.

Medical Cases Reported by Dr. Barbash.

(1) A case of Purpura Hemorrhagica.

Joseph Saltzman, born October 1, 1916, normal labor, weight 12 pounds. During first 2 years of life had whooping cough, mumps, measles and chicken-pox. In 1918 he had an attack of influenza, from which he made a perfect recovery. In 1919, another attack of influenza, lasting 10 days. Three days after he was apparently well he developed some purpuric spots of various sizes, under the skin, all over the body. Two or 3 days later started bleeding from the nose. Thereafter, these attacks of purpura with bleeding occurred every 2 or 3 months, but did not seem to leave after-effects of weakness or discomfort; in fact, when the hemorrhages stopped, he appeared perfectly well. The bleeding lasted for a few minutes to 5 or 6 hours. At this time he was under the care of Dr. A. J. Cohen, of Philadelphia, who gave him injections of var-

ious preparations, the nature of which I do not know.

He came under my care January 12, 1924. At that time his nose, pharynx and teeth were in bad condition, and he had submaxillary enlargement from abscessed teeth. A culture from the gums showed micrococcus catarrhalis, pneumococci, staphylococci and short chains of streptococci. These short chains were afterward proved to be hemolytic streptococci. His coagulation time was $1\frac{1}{2}$ minutes, which was normal; but his bleeding time was 8 minutes, which was long.

My first treatment was directed to the apparent focus of infection in nose, pharynx and teeth. In addition to local treatment, an autogenous vaccine was prepared from organisms found in the purulent discharge from the gums. The results from this treatment seemed very gratifying; bleeding stopped, there was only an occasional small purpuric spot, he gained 6 lb. in weight before the vaccine treatment was completed, and it seemed he was on the road to complete recovery.

In July, 1925, he developed pain in his right lower quadrant, with rigidity over the appendiceal region. He had a leukocyte count of 40,500 with 92% polys. Coagulation time was 9 to 11 minutes. He was kept in bed and ice bags applied over the appendiceal region. Temperature ranged from 103 to 104°. After a few days temperature gradually subsided, and a palpable mass developed in right lower quadrant. This gradually subsided over a period of several months. At the time I thought he had an attack of acute suppurative appendicitis, in spite of the excessively high count, with abscess formation. Since then I have come to the conclusion that this was a very large hemorrhage into the peritoneal cavity, which was walled off and finally re-absorbed.

In February, 1926, after a severe hemorrhage, he was given 300 c.c. blood by transfusion, following which he showed marked improvement for about a year. He then had repeated recurrences of his purpuric spots and hemorrhages from the nose, at intervals of several months. Intramuscular injections of 30 c.c. whole blood was used in an effort to check the hemorrhages. The first 2 injections were successful. On subsequent occasions they were without effect.

Local treatment of the hemorrhages from the nose and gums consisted of various hemostatics such as adrenalin and thromboplastin, besides nasal packing. Adrenalin and horse serum were also given intramuscularly.

In February, 1927, he had a second blood transfusion, with beneficial effects until January, 1928, when he had a recurrence of the purpuric spots, preceded by fever, followed by hemorrhages. He was admitted to the Atlantic City Hospital, blood studies made and transfusion attempted; 100 c.c. were given, and the operation discontinued due to blocking of the needle. A few days later it was repeated and 380 c.c. given.

His attacks of hemorrhage were always preceded by extreme restlessness and fever as high as 103-104°. The bleeding at times continued for as long as 6 or 7 hours. Gradually each attack became more difficult to check; he seemed a number of times almost exsanguinated and it took longer for him to regain a comparative degree of health and strength.

Physical examination upon admission to the hospital January 16, 1928, showed a well nourished boy about 12 years of age, extremely pale as the result of hemorrhages extending over a

number of years. Aside from pallor, the only evidence of pathology was a spleen enlarged enough to be slightly palpable below the margin of the ribs.

Blood studies were made frequently through January and February, and on March 6, show: R. B. C., 3,500,000; W. B. C., 9100; hgb., 34%; color index, .4 plus; polys., 66%; S. lym., 33%; eosinophiles, 1%. Large numbers of microcytes; numerous poikilocytes; moderate polychromasia; marked vacuolation. Coagulation time (Lee & White) 15 min. Bleeding time 7 min. 30 sec. Practically no clot contractility. Blood platelet count 94,000 per c.mm.

Treatment during the time in hospital consisted of rest in bed, a diet rich in iron, glassful of liver pulp daily, adrenalin and thromboplastin packs for the hemorrhages, and ultra-violet ray exposures, starting with one minute at 30 in. and increasing 1 minute daily.

The operation of splenectomy in treatment of purpura hemorrhagica was first performed by Kaznelson in 1916, who argued that the hemorrhages were due to constant reduction in the number of blood platelets or thrombocytes by the destructive action of the spleen. He suggested the name of thrombo-cytolytic purpura. Frank also advised splenectomy, but for a different reason. He claimed that the spleen had an inhibitory action on the bone marrow, and for this reason called the disease "essential thrombopenia". Koster pointed out that experimental evidence favored Kaznelson's view, for he states that were platelets not found in sufficient numbers the amount of thromboplastic substance furnished the blood by their destruction would be insufficient to cause prompt coagulation. The coagulation time in this disease usually remains normal. It appears, however, to be prolonged immediately prior to a fresh hemorrhage. Following in the wake of Kaznelson and Frank, many observers performed splenectomy in the treatment of purpura hemorrhagica, and reported good results therefrom.

Prolongation of bleeding time, reduction in the number of platelets and normal coagulation time occur in secondary purpura, as well as in primary, and all foci of infection must be cleared away before we consider a case one of primary purpura hemorrhagica. There is a considerable diminution of platelets in pernicious anemia, aplastic anemia and lymphatic leukemia, though perhaps to not such a marked degree. In fact, aplastic anemia and purpura hemorrhagica merge imperceptibly into each other, and it is difficult to decide where one begins and the other ends. The deficiency in blood platelets in aplastic anemia is supposed to account for the hemorrhagic tendency.

Frank recognizes 3 degrees of myelophthisic conditions.

(1) Intermittent thrombopenia, in which there are occasional hemorrhages. It occurs mainly in children and includes those conditions known as peliosis rheumatica, Henoch's purpura, etc. He states there is a reduction in the number of platelets before the hemorrhage, but between attacks they are normal.

(2) Essential thrombopenia, or purpura hemorrhagica, in which there is always a continuous reduction of platelets, usually an anemia, and often a leukopenia of varying degree, with a diminution of polymorphonuclears, both relative and absolute.

(3) Aleukia hemorrhagica or aplastic anemia,

in which the anemia and the leukopenia of purpura hemorrhagica are accentuated.

The majority of spleens removed from patients with purpura hemorrhagica show hyperplasia of the endothelial phagocytes. The spleen in most cases is enlarged 2 or 3 times normal size and contains a large amount of blood.

In regard to the relation of blood platelets to the bleeding time, in most cases a diminution in the blood platelets and a prolongation of the bleeding time is a forerunner of hemorrhage. There are some cases reported in which there was a reduction in the platelets alone, without an increase in the bleeding time, in which there were no hemorrhages. It is also a fact that in pernicious anemia there is a diminution in the number of platelets and the bleeding time is normal, and as a consequence no hemorrhages occur. Experimentally, it has been shown that unless the bleeding time is prolonged hemorrhages do not occur with diminution in the platelets alone. Rockwood and Sheard have demonstrated in purpura hemorrhagica, by instantaneous microphotograph, a structural change in the platelets which is not demonstrable in other diseases such as pernicious anemia. In other words, these men contend that there is a qualitative change in the platelets in purpura hemorrhagica.

In an editorial in the *Jour. A. M. A.*, 81:1114, 1923, the writer concludes that citration of blood given in transfusion destroys the blood platelets and lowers the hemostatic power of the circulation. Allan Spence, of London, in the *British Journal of Surgery*, January, 1928, contends that, if well diluted, sodium citrate does not have this action. He states that transfusion has stimulating effect on the bone marrow and causes an increase in the production of blood platelets which lasts but a few days; afterward, this stimulating effect disappears with consequent diminution in platelets and a prolongation of bleeding time.

Spence reviews 101 splenectomies for purpura hemorrhagica. He indicates that there are 2 types, the acute and chronic. The acute cases are bad surgical risks, 10 out of 12 dying. The chronic cases are much more favorable, there being improvement or cure in 67 out of 80 cases.

The effect of splenectomy on the blood platelets varies considerably. In most cases there is a great increase, the count rising to normal in some, and well above normal in others. Eventually the count returns to normal, usually within a year. The blood picture after splenectomy, according to Noguchi, shows an increase in the number of red cells, diminution in polymorphonuclear cells, and a lymphocytosis during the first year. Later, the lymphocytes return to normal and there is an eosinophilia.

The question is raised as to why some cases of purpura hemorrhagica improve after splenectomy and others do not. Bedson claims that the entire reticulo-endothelial system is responsible for regulation of the blood platelets. In this system are included many of the cells of splenic pulp, the megakaryocytes of the bone marrow, the medullary follicles and cords of the lymphatic glands and other lymphatic structures of the splenic sinuses, of liver capillaries and of capillaries in the adrenal and pituitary glands. When the spleen is removed the rest of the reticulo-endothelial system takes up the work of balancing the number of platelets. If the entire system is at fault, splenectomy does not do much to improve the patient. In those cases where the spleen alone is affected, the work is taken up by the rest of the system and, the platelets not be-

ing destroyed excessively, the patient does well.

In a third type, the bone marrow and the extrasplenic reticulo-endothelial system are damaged rather than the spleen. The platelets are reduced by the rest of the system and removal of the spleen has no effect whatsoever. There is no rise in the number of platelets and no cessation of hemorrhages.

Which of the 3 types the present case belongs to is problematic. If in the involvement of his reticulo-endothelial system the spleen is the chief offender, a splenectomy will be of great benefit. If the bone marrow or the rest of the system is at fault, he will not be benefited and the outlook as a result will be rather gloomy. I am inclined to believe that owing to the fact that his spleen is palpable, which means an increase in size of at least 50%, the splenectomy will be of benefit.

(2) An Odd Case of Nasopharyngitis, Pleurisy and Pneumonia.

The case I am now about to present is an unusual one, particularly in the blood findings during illness in hospital. Patient was taken ill about the middle of October with severe occipital headaches, for which she called to see her physician, who upon finding her blood Wassermann 4 plus proceeded to administer at weekly intervals doses of what I presume was nearsphenamin, intravenously. She says that after each injection she had a chill, severe headache and fever. This continued for about 2 months, after which she discontinued treatment. About February 2 or 3 she developed a severe sore throat, headache and fever. She called to see Dr. Carrington, who advised that she be sent to the hospital.

Examination upon admission revealed white patches on her tonsils, several of the crypts in the tonsils being filled with a white exudate, and some patches on the posterior pharyngeal wall and soft palate. Her nasopharynx was highly inflamed and there was a thick mucopurulent discharge. Right ear drum was bulging, and a few days later broke. From the ear, she had a purulent discharge lasting for a number of days. Moderate enlargement of posterior cervical glands.

Family history was of no interest. Past illness were measles, typhoid fever and erysipelas.

Physical examination, aside from that already mentioned, was negative. Her temperature on admission was 103.2° and ranged between 102 and 104.2° for a day and a half. It then began to go down and by the morning of the third day was normal. Thereafter temperature ranged between 97.1 and 99.4° until the end of the seventh day, when it became subnormal and remained subnormal for 4 days. This brings her to the twelfth day, when her temperature rose to 100.2° and thereafter ranged between 98.2 and 100.3° until the twenty-first day of her illness when it was 100°, and since when it has not been above 99.3°.

Respirations were irregular, between 20 and 40, being low at one taking and high at the next. Pulse ranged between 104 and 120. Blood pressure 92/62.

On February 5, when her temperature was at its height, when she had the acute nose, throat and ear infection, the blood count was: R. B. C., 2,500,000; W. B. C., 2000 (a marked leukopenia); Hb., 45%; color index, .9 plus; small lymphs, 100%, no other white cells being seen. She had a moderate amount of anisocytosis, macrocytes

predominating. Wassermann was strongly positive. Culture from throat showed a staphylococcus aureus infection. February 7, while temperature was dropping, her leukocyte count was 4300, with 90% small lymphocytes. On February 8, she had 9800 leukocytes, with 48% small lymphocytes.

About this time she went into a state of shock and complained of severe pain in right chest. Examination revealed a marked pleuritic friction rub heard over the entire right chest, particularly at the base posteriorly, in the axilla, and anteriorly over the lower lobe. The next day we were able to distinguish beginning lung consolidation, and after several days this consolidation involved the lower and middle lobes of the right lung. Her temperature, as I stated before, was very nearly normal at this time, in spite of the pleurisy and pneumonia. Further leukocyte and differential counts were as follows:

February 15, her leukocyte count was still going up and attained the, to me, unheard of number of 105,600, with 85% polys, and 4% small lymphs. At this time she had anisocytosis, microcytes predominating. Nucleated red cells were found, among which was a normoblast with a four leaf clover nucleus.

February 17, the leukocytes dropped to 48,500; polys., 89%; small lym., 8%.

From then until March 8 there was a gradual reduction: first to 44,600 with 88% polys.; then to 37,000 with 85% polys.; to 27,600 with 93% polys.; to 19,100 with 87% polys.; to 15,800 with 89% polys. She then had a slight rise to 20,000 and 22,000, down again to 16,000 and 11,000, up to 21,600, down to 12,000, and on March 7 down to 9800. During the drop in her leukocytes the abnormal red and white cells gradually decreased in number and variety.

Several sputum examinations showed a number of pus cells with an occasional pneumococcus present and some pyogenic organisms. Urine examinations were practically negative, containing a faint trace of albumin, a few leukocytes and occasionally a hyaline or granular cast.

X-ray examinations of the chest are as follows: February 22, pneumonia of the middle lobe of the right lung, with beginning resolution, thickened pleura with probably some fluid at the base. Interlobar effusion between the middle and upper lobes, right lung, with an incompletely resolved pneumonic area above. Marked widening of the aortic shadow without definite increase in the antero-posterior diameter. Generalized increase of all lung markings, both lungs, probably circulatory.

March 8: Shows some thickened pleura and incomplete resolution of the pneumonia area in the base and middle lobe of right lung. Diaphragmatic adhesions, a right-sided pleuropericardial adhesion anterior, interlobar area has been partly absorbed, leaving a thickened interlobar pleura, with a diffuse parenchymatous reaction above and below it. (Report by Dr. Wescott.)

The treatment was symptomatic and of no particular interest. As I stated before, the case is interesting from the standpoint of the blood picture. Her temperature during the pleurisy and pneumonia was absolutely not that of a pneumonia.

Dr. Kilduffe first saw this case with me when patient had nasopharynx involvement, and the 2000 leukocytes with 100% small lymphocytes. He thought we might have a case of a condition called agranular cytosis, one of the newer dis-

eases not in the text-books as yet, of which about 48 cases have been reported. Later, we came to think we might have a case of acute leukemia, which we were fortunate enough to see in the aleukemic state. I, at least, have again changed my mind and do not take this thought seriously. It is evident that the toxins produced during her illness stimulated her bone marrow to the production of a large number of blood cells, many of them abnormal in type; but why the infection in the nose and throat should produce a leukopenia with an inhibitory action on the bone marrow, and a few days later an infection of her lung and pleura produce a leukocytosis with a large number of abnormal cells, is still to be explained. It is possible the syphilis may be one of the altering factors.

A further study of her blood over a number of weeks will be of interest. If any further abnormalities develop, we will be glad to report to you at some later date.

Gynecologic cases were presented by Dr. W. J. Carrington.

(1) Female, white, age 37, exhibited to show team work with other services. Admitted to the medical service for a minor ailment and, as customary, referred for gynecologic examination. This examination revealed small eroded area on anterior lip of cervix, of which the patient was unaware. Biopsy was performed and the laboratory reported a few early cancer cells present. Panhysterectomy was performed and complete recovery is expected. The x-ray department is giving her deep x-ray therapy at the present time.

(2) Female, age 36, has 2 children, ages 5 and 11. Several months ago passed a large clot. Admitted to hospital complaining of fever and pain in lower abdomen. Examination revealed a large tender mass above and to left of the median line in the pelvis. Hemoglobin 48%, temperature ranging from 101 to 103°; 17,000 leukocytes. Pre-operative diagnosis, suppurative ovarian cyst. Operation revealed huge unruptured tubal pregnancy, no fetus present. Laboratory report shows fetal cells.

(3) Female, age 22. Twin tubal pregnancy, supposedly due to obstruction in the fallopian tubes.

(4) Female, age 16. Previous symptoms, distress after eating. While at work suddenly seized with violent abdominal pain and collapsed. Sent to hospital for a supposed ruptured gastric ulcer. Referred to the gynecologic service. Patient was restless, thirsty, had dilated pupils, rapid pulse, temperature 95.3°, blood pressure 59, hemoglobin 37%, red cells 2,000,000, shifting dullness in flanks. There had been no menstrual irregularity. Operation revealed ruptured ectopic gestation. Blood removed from abdomen was strained through gauze and re-infused back into vein. Hemoglobin today is 60%. Reinfusion is not a recognized method of procedure, but it has been shown that red blood cells retain their vitality for 48 hr. and blood has the advantage over salt solution in that at least some cells have oxygen-carrying properties and may stimulate bone marrow to increased activity.

(5) Patient admitted to medical ward with ambulatory typhoid fever. After recovery a mass was discovered in the pelvis. Sedimentation curve of red blood cells normal and, because of this, diagnosis of dermoid cyst was made; and confirmed at operation. The sedimentation test is the rapidity with which red blood cells sediment in citrated blood. In health it is a matter

of hours. In various diseases it takes various times. What it is that modifies this time is not definitely known but various conditions present, such as electrolites in the serum, serum proteins, number and size of red blood cells and the technic used, determine these differences in time. The time of sedimentation is increased in malignancy, pregnancy, tuberculosis and inflammatory conditions. This test is of great help in tuberculosis as it shows long before other symptoms are visible.

Pediatric cases were reported by Dr. Joseph Marcus, whose topic was "Premature and Congenitally Weak Infants".

The premature baby is not merely a small baby; it is an undeveloped baby. It is not ready to be born or to live under extra-uterine conditions. The younger it is, the less developed it is, and the less prepared to struggle against the abnormal conditions in which it is placed. It is intended to float in warm water of a constant temperature; it has, instead, to be handled and exposed to air of different degrees of temperature. Its circulation is compelled to change from the fetal to the adult form months before it is ready for the change. It is compelled to breathe air into lungs only partially ready for use with an undeveloped thorax and respiratory muscles. It is obliged to use digestive organs only partially completed, instead of obtaining nourishment already prepared through the circulation. In short, it is not prepared for an independent existence and has to depend for its life on organs only partially ready to perform their functions. The more these facts are appreciated, the more care and attention will be given to these infants.

There are very few authentic cases of the survival of infants born before the twenty-seventh or twenty-eighth week of pregnancy. Very few survive any length of time, if the weight is under 2 lb. or the length less than 13 in. It is not of much practical importance, except for medicolegal reasons, to know the exact age of a premature infant. No matter how young it is, how little its weight and length, or how poor its prospects of surviving, it should always be treated as if its chances for life were of the best.

In a general way, all the defects and weaknesses of the infant at term are exaggerated in the premature infant. Certain points in their development are, however, worthy of more detailed consideration. The lungs at full term are poorly enough fitted for use; they are even less so before term. They contain comparatively little alveolar structure and on account of the loose attachment of the blood-vessels are very prone to congestion and inflammation. The pulse and respiration are irregular in rhythm, partly from lack of nervous control and partly because of the under-developed condition of the organs and muscles concerned. All the functions of digestion, although present, are feeble. That for sugar is more developed than are those for fat, starch and proteins. The function of the sweat glands is not developed even at full term, and hence, is not, of course, in premature infants. The premature infant is thus deprived of one of the most important ways of losing heat. High external temperatures are, therefore, extremely dangerous for it and may comparatively easily cause a "heat stroke".

On account of their small size, the surface area of premature infants is proportionately larger than that of full term babies. Their heat regulatory centers are, moreover, poorly developed. Furthermore, they have practically no fat tissue to conserve heat. Consequently they lose heat

very rapidly. They cannot, therefore, bear low temperatures or exposure. They must be protected in every way against cold and exposure. The importance of this protection can hardly be exaggerated. It is perfectly possible for a single slight chill to turn the scale from life to death and undo the labors of weeks or months. On account of their greater loss of heat, premature babies need relatively more food. They also need more food because of their greater needs for growth. Their basal metabolism, under good conditions, is strikingly low, probably because they have a relatively small amount of active heat-forming tissues. Because of their slight muscular activity, less than 10% of the basal metabolism is used up in muscular exercise. The loss of calories in the excreta is, moreover, usually less than 10% of the food intake, unless there is diarrhea. In spite of these slight advantages, the disadvantages under which they labor greatly outweigh them. They require from one-fifth to one-quarter more calories per kilo than do normal infants. It is impossible to state exactly how many calories per kilo a premature baby needs, because experience shows that some babies need far more than others. In spite of their greater need for food, they are, however, less able to take and digest it than full term babies. It is evident, therefore, how great the disadvantages are under which they labor.

General Staff of Atlantic City Hospital

Joseph H. Marcus, M.D., Secretary

The regular monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium, March 16, 1928. The meeting was called to order by Dr. D. Ward Scanlan, President.

The scientific program was as follows: Report of Pediatric Service, Dr. Walter B. Stewart; Report of Surgical Service, Dr. Thomas D. Taggart; Case Reports, Dr. John S. Irvin.

Following presentation of a statistical report in which a total of 64 patients were classified, Dr. Stewart presented the following cases.

Case 1. The first concerns a husky white boy aged 1 year who illustrates well the difficulty we often encounter in the differential diagnosis of "Acute Respiratory Obstruction". He had been a normal, well baby until one week before admission, when one night a dry cough set in. The following morning breathing had assumed a tight, wheezing character, which became remittently more labored during the week, while the cough disappeared. On the third day edema of the eyelids developed, and on the fourth day a diffuse macular, hemorrhagic rash appeared on the face, neck and trunk, both of which became more pronounced. On admission the striking features were: fever of 103°; extremely labored breathing, especially during expiration, of 56 to the minute; a blown-up, emphysematous chest; slight cyanosis; edema of eyelids; skin rash; suppression of breath sounds in left lung, especially over the back; inflamed pharynx full of thick mucus but without visible membrane; and extreme restlessness and anxious facies. The diagnosis lay among one of 4 possibilities; laryngeal diphtheria, foreign body, atypical pneumonia and edema of the glottis. Although foreign body was most likely because of the unilateral suppression of breath sounds and expiratory dyspnea, it seemed best to give 20,000 units of diphtheria antitoxin at once. An emergency radiogram showed no opaque foreign body, only obstructive emphysema of both lungs. Laryngoscopic examination showed no membrane, only diffusely reddened, edema-

tous tissue with thick, tenacious secretion. Cultures from the larynx were negative for the diphtheria bacillus. Bronchoscopic examination was not done because of fear of increasing the edema. Next day the condition was unchanged except for the presence of many moist râles throughout the left lung. Ipecac was given in large doses. On the third day there was a striking improvement. Breathing became normal and color good, temperature fell, edema and rash disappeared, and we had an unexpectedly sudden recovery.

The final diagnosis is: infection of entire respiratory tract, probably streptococcal in origin, with edema of the glottis and pansinusitis (causing the edema of the eyelids). The skin rash points to a blood stream infection. The unilateral suppression of breath sounds can be accounted for by plugging of a primary bronchus with the thick, dry exudate. Unfortunately a blood culture and poured throat cultures were not obtained.

Case 2. The second case presents many of the same features as the first, but the diagnosis proves different. It also concerns a plump white boy of 1 year, the onset of whose illness was sudden at 3 a. m. with dyspnea and high fever 18 hours before admission. When first seen he was thrashing about wildly, digging the skin with his nails. He was slightly cyanotic. There was marked dyspnea, expiration being especially prolonged and labored, 60 to the minute, with retraction of the lower costal margins. There was an occasional shallow cough interspersed with frantic respiratory efforts. The temperature was 104°. The throat was filled with a thick, mucopurulent secretion, without membrane. Breath sounds were remote over both sides of the chest, with inspiration practically absent on the right, and expiration prolonged and squeaky. The same diagnostic difficulty obtained as in the first case. Fluoroscopic, radiographic, and laryngoscopic examinations gave only negative assistance. However, on the third day in the hospital, after respirations had become easy, though still rapid, the first signs of a pneumonia developed at the right base posteriorly, and next day frank tubular breathing was present. Convalescence was uneventful. The dyspnea and unilateral suppression here were caused by plugging with the thick, dry bronchial secretion present during the first few days.

Case 3. You would scarcely suspect that paroxysmal tachycardia could be mistaken for an acute abdominal condition, but this next patient was admitted as a surgical case in profound shock. This case of "paroxysmal tachycardia", which is a rare condition in childhood, was a white boy, aged 12 who had had several mild attacks of epigastric and precordial pain for 4 days before admission. He was awakened from a sound sleep on the morning of admission with a severe attack, accompanied by dyspnea, persistent vomiting and delirium. He was prostrated; temperature was 101°. The pulse was imperceptible at first, later 252 to the minute. He was deeply cyanotic. The heart sounds were of tic-tac, embryocardial nature, and the left border of the heart extended to the anterior axillary line. He was more comfortable propped up in bed. To us the abdomen was negative. Twelve hours later the heart reverted to normal mechanism during sleep, and in the morning the boy appeared normal in every way. The heart became normal in size and sound and up to the present time (9 months after discharge) there has been no recurrence of the condition.

Case 4. The report of any pediatric service would be incomplete without the inclusion of a "nutrition case". The following one is of especial interest because it illustrates the influence of infections on nutrition and the remarkable recuperative powers in an apparently moribund child. At 8 months the child weighed 12½ instead of a normal 18 lb., because of poor dietary control since birth culminating in several weeks of vomiting and diarrhea, and the development of a large peri-anal abscess. The temperature ranged from 100° to 105.5°, the vomiting and the green, watery diarrhea continued, and a bilateral otitis media was discovered and drained. He became markedly dehydrated, the skin hanging in loose folds and the eyes sunken deep in the orbits. The hands were continually in flighty motion, the pupils were dilated, and the breathing indicated acidosis. After an injection of 120 c.c. of 5% glucose into the longitudinal sinus and 250 c.c. of normal saline into the peritoneal cavity, he brightened considerably. Nothing was given by mouth at first except water, which he took well and retained. Then gradually increasing amounts of case and of lactic acid milk were given. The abscesses were kept well opened. Because of persistent inability to retain fluids and consequent dehydration, he was given intraperitoneal injections of normal saline almost every day for 3 weeks, during which time the group of infections was augmented by an extensive impetigo. This was kept under control by local applications of gentian violet. There was a daily loss of weight for over 3 weeks to the low point of 10½ lb., at which the saline injections were discontinued, the diarrhea and vomiting abated, and the infections ceased to drain. The improvement was rapid after this, with a gain of 3½ lb. in 3 weeks. At the last report he was in good condition, weighing 18 lb. at the age of 1 year. Undoubtedly the child would have died without the continual injections of fluid parenterally during those 3 weeks.

Case 5. The next case is one of "profound anemia secondary to dietary deficiencies", cured by general hygienic measures without transfusion. He was a white boy of 4 years, weighing 18½ lb.; one of twins, the other twin being entirely normal. He was nursed during the first year, and received a quart of cow's milk daily after that, with little else except oatmeal-soup, bread and butter, and an occasional egg. He had always vomited to some extent after feeding. There were frequent colds and attacks of fever. The neighbors had noticed an increasing pallor during the preceding year, yet he was strong enough to walk about and play actively. On admission, on May 23, the blood picture was as follows: R. B. C. 1,460,000; Hb. 10%; W. B. C. 8700; P. M. N. 38%; Lym. 61%. There was no trace of color in the skin or mucous membranes. The spleen and the liver were not palpable and there was no enlargement of the lymph nodes. There were evidences of a slight amount of rickets. On the ward he was given an iron-rich diet, especially meats, eggs and green vegetables, put into the direct sunlight for a large part of each day; and he was given intramuscular injections of iron arsenite twice a week. During the month on the ward the R. B. C. rose to 2,180,000 and the Hb. from 10% to 30%; and the weight was increased from 18½ to 21 lb. For the past 6 months he has been at the Betty Bacharach Home, receiving the same form of treatment, with no transfusions at any time. Today his R. B. C. are 4,500,900; Hb. 65%; and weight 28 lb. He

appears quite normal, except of course that he is still much undersized for his age.

Case 6. The first 5 cases represent cures, but one of the most interesting came to necropsy. It was the unusual appearance of "chronic interstitial nephritis" in a colored child aged 7 years, a condition rarely seen at this early age. Although, as is true in most cases, the etiology remains obscure, 2 possible causal factors were in evidence here. Frequent attacks of sore throat and tonsillitis had left a pair of moderately large, boggy, scarred tonsils. Furthermore, there was some evidence of the existence of congenital syphilis; the presence of a positive Wassermann in the mother; the fact that the child between the ages of 2 and 6 months had been treated by a physician in Florida twice a week by inunctions and drops by mouth for what he apparently considered congenital syphilis; and the presence of the typical Hutchinsonian teeth. However, her blood Wassermann on the ward was always negative, and there was no other evidence of syphilis. She was well nourished and well developed for her age. Had been in good health except for nocturia of at least 3 times a night during the past 2 years, until the onset of the present illness on Easter Sunday of 1927. There was headache, vomiting, and edema of the face, soon passing into a general anasarca. Admitted to the hospital 6 days after the onset. The eyes were swollen tight shut; all the tissues were water-logged; moderate ascites; complete suppression of urine for 60 hours; soft systolic murmur at the apex of the heart; blood pressure was 170/120; complained of severe headaches and spots in front of her eyes. Examination of the eye grounds were negative. There were no convulsions.

Excretion was stimulated by hot packs and intravenous injections of 50% glucose. Phlebotomy lowered the blood pressure to 138/100. The blood pressure remained about 140/110 until near the end. There was persistent vomiting. The temperature remained normal until the terminal rise. The urine was always of very light straw color; of fixed specific gravity of 1.015 to 1.097; with 200 to 400 mgm. of albumin; with very few casts, mostly hyaline but occasionally granular and waxy; with clouds of pus cells, but no red blood corpuscles. There was extreme nitrogen retention and a progressive secondary anemia. Blood nonprotein nitrogen, instead of the normal 30 mgm., gave readings of 175 to 666 mgm.; blood urea nitrogen, instead of the normal 15 mgm., gave 100 to 350 mgm.; the blood creatinin, instead of the normal 2, gave 5 to 20 mgm. In spite of a blood transfusion, the red corpuscle count fell to 1,500,000 and the hemoglobin to 10%. After 2 weeks the anasarca had almost disappeared and she was voiding quite freely. She became drowsy most of the time, but always responded intelligently to questions. On May 16 she began to vomit blood, and soon there was persistent bleeding from the nose, mouth and vagina. Toward the end she became irrational and fell into a deep acidosis. On June 4 she died, 1½ months after the onset.

At necropsy, the kidneys appeared very small and white, and were covered by a thick, somewhat adherent capsule, on the removal of which there was found a finely granular and knobby surface. On section the cortical striae and glomeruli were hardly visible, and the cortex was narrow. The heart was moderately enlarged, especially the left ventricle. There was no sclerosis in the aorta or the arteries, but only a few fatty plaques. In a word, the appearance of "the small

white kidney" in a child of 7 years is extremely unusual, and the cause open to speculation.

Dr. Stewart's report was discussed by Drs. Kilduffe, Marcus, Silvers, Davidson, Andrews and Pilkington.

Dr. John S. Irvin, Associate in Surgery to Dr. Thomas Taggart, presented a statistical report of the Surgical Service extending for a period of 3 months. There was a total of 173 admissions, of which 113 were males and 60 females. The total number of operations performed was 134.

The following case report of "ruptured gangrenous retrocecal appendix" with chest complications was presented.

Jean C., age 25, was admitted with history of pain in right lower quadrant past 3 days; several previous attacks of a similar nature.

At operation, a gangrenous ruptured retrocecal appendix was found and drained in the usual manner. Temperature did not return to normal after operation although drainage was free and there was no sign of spreading peritonitis. Condition seemed good in spite of temperature. There was no abdominal tenderness but there was slight persistent tenderness in right lumbar region. About 2 weeks after operation she began suddenly to cough up very large quantities of greenish pus and was quite prostrated. At this time there was dullness and absent breath sounds over a large area of the right chest. Roentgenographic report by Dr. Wescott:

"Nearly all of the right lung shows extensive clouding, some of which I think is due to atelectasis and some to compression; the heart is rotated to the right, so much so that the apex is only a short distance from the spine. The right diaphragm is up to the sixth interspace posteriorly. The clouding of the lung is patchy in type, and while I can find no definite abscess cavity it undoubtedly shows a generalized infection as well as compression. The elevation of the diaphragm with the liver shadow point to hepatic abscess with secondary lung infection as the most probable diagnosis."

Drainage from the lung gradually subsided and her general condition improved. There was still some slight rise in temperature.

About 2 weeks later she suddenly evacuated a large quantity of greenish pus through the abdominal wound, enough to soak the bed. After this she improved rapidly and soon left the hospital with very little drainage. This soon stopped and she has apparently been well since.

Was the lung condition due to lymphatic infection or did the liver or subdiaphragmatic abscess rupture directly into a bronchus?

I favor the latter because there were no signs or symptoms pertaining to lung involvement until she suddenly began to cough up large quantities of pus. It was probably the same abscess which later evacuated itself through the abdominal wound through a tract behind the ascending colon. If the liver abscess ruptured upward, the case of the lung must have first been adherent to the diaphragm for there was no contamination of the pleural cavity as evidenced by repeated needling.

Dr. Irvin concluded his report with a presentation of the mortalities. Each case which was outlined in brief presented the salient features on admission, the operative findings and the subsequent course. The diagnoses embodied the following conditions: Ruptured gangrenous appendicitis, acute intestinal obstruction, gangrene of lower extremity, fractured skull, burns of third

degree, strangulated femoral hernia, gunshot wounds, ruptured aortic aneurism, fracture of the trachea.

Dr. Harry Subin, referring to Jean C., stated that this patient was sick three days prior to admission and had been treated for rheumatism. On the follow-up of this case after discharge from the hospital he found that the pulmonary complication had cleared, the operative wound had completely healed and the patient was progressively gaining in weight following discharge.

Dr. Samuel Barbash reviewed the importance of giving proper amounts of insulin and the subsequent utilization of the carbohydrates following specified doses of insulin.

Dr. Homer Silvers discussed chest complications and sequels following abdominal operations. In the case of Jean C. he felt that the infection extending into the chest was obviously secondary to infection following the gangrenous ruptured appendix.

Dr. Theodore Senseman maintained that at present there seems to be a tendency to exaggerate the effects of general anesthesia in certain heart conditions; he felt that the consciousness of the patient with a bad heart in watching an operation and being oriented to his environment, produced probably a worse effect upon the patient than the so-called bad effects accompanying general anesthesia.

Dr. D. Ward Scanlan differentiated between pseudo and true insulin shock; he stressed the value of necropsy in operative cases that died; that secondary chest infections are apparently not uncommon following abdominal infection.

Dr. Thomas Taggart, referring to the 2 cases of diabetic gangrene, stated that operative procedure was instituted as a last resort as these patients presented features that marked them for extremely poor surgical risks, the only alternative being surgical intervention.

Dr. Subin related a case of diabetes with infected gangrenous toe in which amputation was performed above the knee.

Dr. Taggart discussed a series of operative fracture cases, the roentgenograms of which were demonstrated by Dr. Wm. C. Wescott. In 3 cases of fractures of the femur in which good reduction was impossible by the closed method and where fragments had muscle interposition, open bone reduction was instituted. One case was performed under spinal anesthesia and with the usage of bone plates and bone screws. Dr. Taggart felt that bone plates although not possessing the same tensile strength as steel, have certain advantages which makes them preferable for use in specified cases. It is not necessary to remove the bone plates and bone screws, and when an infection results it is not always incumbent to remove the bone plates.

Dr. Senseman stated that bone reductions were extremely delicate and a great deal of patience was required in the proper approximation of fragments; the question of infection was to a lesser extent a prominent factor at the present time but the incidence markedly less than years ago when this procedure was first instituted; that 10 days at least should elapse before the open reduction of a more or less simple fracture, allowing the tissues to recover from the trauma to a certain extent; that fat embolism occurs not infrequently; that thorough flushing at the entire site of operation should always be performed before approaching the tissues and that this procedure has a marked tendency to lower the incidence of infec-

tion; that one of the primary indications for bone reduction was failure to approximate the bony fragments and to a lesser extent, muscle interposition.

Dr. Homer Silvers felt that the ideal time for bone reduction is immediately following the accident if consent be granted and that 10 days is an arbitrary time. He felt that the longer a bone remains in malposition the greater trauma occurs to the tissues; that fracture of the tibia complicated by the formation of blebs and swelling presents increased difficulties arising from this secondary infection.

Dr. Wescott emphasized the striking reduction in the number of infections as witnessed by him in follow-up fracture work in the Atlantic City Hospital.

Dr. V. Earl Johnson reported that in 1 patient subjected to open reduction of the femur, bone plates and screws were used in order to minimize the amount of surgical trauma, in a patient of advanced age; this eliminated the necessity of subjecting the patient to another surgical operation in order to remove the plates at a later date as would have been necessary had the Lane plate been used.

Dr. Wm. J. Carrington stated that fat embolism occurs almost always after operation on the bone and can be found in the urine, but fat as a rule disappears after several days and is harmless, as found in the urine.

Dr. Taggart after closing the discussion reported in brief two cases.

Case 1. Adult female, admitted with intense jaundice of 6 months' duration; provisional diagnosis of carcinoma of the biliary tract was made. At operation a distended gall-bladder was found with a distended common duct under great tension. At time of operation the head of the pancreas was felt as a hard nodular mass which was instrumental in blocking the common duct. A cholecystogastrostomy was made. Patient was discharged 12 days later in a very comfortable condition with jaundice only faintly present. Diagnosis: "Carcinoma of pancreas".

Case 2. Adult male admitted with diagnosis of "Umbilical Hernia". Dr. Taggart felt that this was a possible urachus infection. At operation it was drained but did not clear up and pus continued to discharge from the umbilicus. Secondary operation was performed under ether anesthesia and the mass, which was found to extend to the bladder, was removed. Patient was discharged 10 days later with an uneventful recovery. Diagnosis: "Infected Cyst of the Urachus".

There being no further business the meeting was adjourned.

BERGEN COUNTY

Spencer T. Snedecor, M.D., Reporter

The successful March meeting made us forget the disastrous February meeting weather. Over 60 members turned out to swap opinions with each other on current mortality, and, incidentally, to vote on the business affairs and listen to instructions on the use of forceps, when nature hesitates. Dr. Winebrake says forceps are brought into play in this country in nearly 40% of all obstetric cases, while it should be nearer 4%.

At the beginning we listened to a most sincere, erudite and inspired testimonial to the memory of our late honorary brother, Dr. John J. Haring, of Tenafly, who was for more than 60 years a

member of our society. This was presented by Dr. John E. Pratt, of Dumont.

The matter of the osteopathic school physician at Hasbrouck Heights was brought up and it seems that the State Board of Education has had him dismissed.

Dr. Sarla, the Treasurer, reported us financially healthy with a balance of \$1279 and the savings account intact. The state society has been paid some \$1300 covering 117 members; 23 are still in arrears.

The building committee moved that a special meeting be called to hear their report and it was so ordered.

The Medical Club of Hackensack wrote to the society asking for a discussion on the subject of medical publicity and advertising. Should the county society sponsor articles or advertisements in the press; explaining such subjects as "Early Symptoms of Cancer" or "Tuberculosis"; other current problems to put the medical profession in the proper light before the public. Drs. D. A. Curtis and H. S. Wolowitz, were ordered to look into the subject and report back.

Dr. F. C. McCormack, our President, and Dr. Joseph R. Morrow have broadcast talks from a local radio station on the "Early Diagnosis of Tuberculosis".

The society endorsed the plan as suggested by the American Red Cross, that in cases of emergency or catastrophe the county society act as a unit under the general plan.

Dr. A. J. Winebrake, obstetrician of the State Hospital at Scranton, Pa., opened the scientific program with a talk on "Indications for the Use of Forceps".

Dr. Winebrake has travelled extensively among European clinics and was able to present the opinions of the leading obstetricians from different parts of Europe. He made particular reference to the modern use of the Kielland forceps.

In Memoriam

The Bergen County Medical Society wishes to record among its official transactions the passing of Dr. John J. Haring, at Toledo, Ohio, December 15, 1927.

That December day brought to a peaceful end, far from his native heath, remote from the scene of his activities, the unusual career of an unusual man.

The sunset of that day, to be typical, must have been marked by rare coloring, not vivid and brilliant as becomes one who lives on the heights of popular acclaim, but subdued, suffused with soft light and traced in delicate hues, reflecting a life from which modesty, kindness, generosity and self respect were not divorced by material success.

More than 60 years a member of this society entitles Dr. Haring to the distinction of having been its oldest member in point both of membership and of years.

Dr. Haring was born in Rockland County, New York, March 15, 1834. Country born and country bred, inured to toil, he helped his father wring from a reluctant soil the inadequate reward of manual labor. Destined, in his father's judgment, to become a failure as a farmer, he was allowed at the age of 14 to follow his own inclinations. Then began the pursuit of an ideal through preparatory schools till its culmination in his graduation from Jefferson Medical College.

He settled in Bergen County in what is now Dumont, and 12 years later moved to Tenafly, which became his home for the rest of his days. While in Dumont he served, almost alone, a territory covering an area of 25 square miles when the means of transportation were slow and difficult. Here he endured and survived the rigors of a country practice that put the physical and mental forces to the severest test and resulted in his acquiring a professional reputation for skill and conscientious service, and cementing personal friendships widespread and unmarred by any questionable artifices of one seeking merely for professional or social preferment.

He practiced medicine in the days when the doctor and the minister had an assured place in the community as its first citizens and shared quite equally the respect, not to say the reverence, of grateful people.

He was a practitioner of the old school and stood high among his fellows whose eye and ear and deft fingers were so finely trained in clinical diagnosis, an art that has largely lost its prestige in these modern days.

In Dr. Haring's veins ran the blood of Holland ancestry. From that hardy race who conquered the ocean, wrested their land from the sea and for decades withstood the armed invasions of proud and imperious Spain in her day of power, he inherited a vigor of body and sturdiness of soul that gave him the mastery over his environment. I have heard him speak of walking every school day for years to and from the school house 4 miles distant, in all weathers, and that for the first 40 years of his professional life he was never absent from his work for more than 24 hours at one time.

The blood and brawn of the Hollander and the instruction of a New England teacher of the old school was a combination fit to produce the man he was.

While he was a stranger to the younger men, Dr. Haring was known to the elders as a gentleman of the finest type, held in the highest esteem and loved for his human qualities. Many still living and multitudes gone hence held in blessed memory the family physician who, through generations, brought skill to the healing of their ills and sympathy to the bedside "where sorrow, guilt and pain by turns dismayed", and who met his own problems and solved theirs with moral courage and sagacity.

Above all, and may we not say as a basis for all else, Dr. Haring was a "Christian Gentleman". He loved the Church as, in his judgment, the instrument for building the kingdom of God in the hearts of men, and served her to the end of his days. He believed in the guidance of an all-wise Being, and who will dare to say that he was not led by this to the practice of the Christian virtues of love, mercy and right living toward his fellowmen?

In view of such a life, lived in conspicuous honor in the sight of men, and closed in peace, the Bergen County Medical Society puts on record for the perusal of generations yet to be, its sense of loss in the passing of one of its fellows so eminently worthy to be held in cherished memory, and transmits a copy hereof to the family of our late colleague.

(Signed)

J. E. Pratt, M.D.,

Committee of the Bergen County Medical Society

Medical Club of Hackensack

Lewis Greenberg, M.D., Secretary.

The Medical Club held its regular meeting February 15 at the Hackensack Golf Club, with Dr. Donald A. Curtis in the chair.

Following a brief business session and dinner, Dr. R. Gilday read an extensive biographic essay on Pasteur. The speaker referred to Pasteur's multitudinous interests, activities, and contributions to science, and pointed out the immediate and more remote benefits to medicine and hygiene, more particularly, resulting from these contributions.

Dr. Donald A. Curtis read an extremely interesting paper on "Nasal Aspects of Gynecology". He pointed out the subtle, very often overlooked or misunderstood relationship between disorders of the nasal structures and disturbances of the reproductive organs and functions. This paper was illustrated by a number of summarized case histories.

CAMDEN COUNTY

R. E. Schall, M.D., Reporter

The regular monthly meeting of the Camden County Medical Society was held Tuesday, March 13, 1928.

The scientific program embraced a symposium on "Pulmonary Tuberculosis" and was opened by Dr. H. M. Landis, who spoke on "Diagnosis", saying:

Practically every medical society is holding a meeting of this kind at the request of the Tuberculosis Association. Nearly all talks of this kind are given by experts who tell you how difficult it is to diagnose; whereas 95% of all cases should be recognized by the ordinary physician with the means at hand. You should protect the patient from going into a hopeless condition by an early diagnosis. An individual comes to you with a suspicion of tuberculosis. You should wipe "chronic bronchitis" off your map; most cases are due to bronchiectasis, emphysema or pulmonary tuberculosis. The condition is transmissible only after long exposure.

A child is very susceptible. Practically all tuberculous children become infected during the first 2 years, regardless of social condition. They either die of it or it heals and they go on to adolescence where the death rate increases again.

Any person living in the house, whether parents, relatives or boarder, that has infection is liable to transmit the disease.

Prodromal symptoms are: hemoptysis, weakness, after noon fever, pleurisy, fissure in ano, chronic cough, loss of appetite, huskiness of the voice, fatigue that persists for 3 or 4 months, and loss of weight. Hemoptysis is a symptom that appears like rain out of a clear sky. Embolism of the lung causes the spitting of blood. Chronic cardiac condition may cause hemoptysis, but if it appears without another cause it is almost always due to pulmonary tuberculosis. A ruptured blood-vessel in the back of the throat once in 10,000 times.

Bear in mind that a pleurisy with or without effusion is due to underlying tuberculosis where the pleurisy persists without obvious cause.

Do not assure the patient that there is no infection, as he will go out and let the disease weaken him and it gets too much hold while we have lost valuable time.

Do not get the erroneous idea that it is exercise they need. Absolute rest in bed is what they need in all active cases.

Any patient with a cough that persists for 2 months is almost surely tuberculous.

Always examine the sputum and one examination is not always enough.

Have the patient take his temperature for 2 weeks and if he comes back with an elevation of temperature 2 or 3 afternoons a week you can rest assured he has tuberculosis.

Dr. Collier spoke on "Tuberculosis from an Institutional Standpoint".

We receive very few early cases at the sanatorium; less than 16%. The chief reason why they do not go early is their horror of the place; second, that the doctor did not tell them. A number go west or southwest with the belief that the climate alone will do them good, then they come back in bad condition; after which a number put themselves in the hands of quacks. The hospital should be a good clearing-house for suspected cases. One negative sputum does not mean anything. X-ray examination is a great help in the early stages of doubtful cases.

Dr. Stone spoke of the "Public Health Standpoint": He dwelt on the early history of tuberculosis and the races that are most susceptible to this disease. The Negro, American Indian and Jewish races have the largest death rate and this we should still try to reduce by early care of incipient cases. Tuberculosis is five times as prevalent in the colored race as in the white. There are numerous latent cases in persons who go about infecting others.

CAPE MAY COUNTY

Eugene Way, M.D., Reporter

A special meeting of the Cape May County Medical Society was held at the Ocean City Golf Club, Somers Point, Tuesday, February 28, at 11 a. m., with President Pettit in the chair. There was an attendance of 31, among whom were Drs. Walt P. Conaway, President of the State Medical Society; H. O. Reik, of Atlantic City, who is an Honorary Member of the Cape May County Medical Society; Robert Kilduffe, of the Atlantic City Hospital; John H. Moore and F. P. Wainwright, of Bridgeton, and G. B. Miller, of Millville.

The President introduced Dr. Conaway, who gave an interesting address on "What the State Society Is Doing For Its Members and the Public". Among the many things noted was "The Antidiphtheria Campaign". It was shown that there are 1,000,000 children in the state and only about one-quarter of them have been immunized. All children should be immunized. The Schick test should be used and toxin-antitoxin given if indicated.

A state census is being made of all crippled children in the state. Annual Registration and a Home for the State Society were recommended. Insurance as adopted by the State Society for Health, Accident and Automobile was endorsed.

The program for the next annual meeting of the State Society was outlined and provides for an enlarged scientific program with sections on eye, ear, nose and throat, and pediatrics.

A vote of thanks was given Dr. Conaway for his able address and, on motion, all his recommendations were endorsed by the society.

Dr. H. O. Reik was then introduced and spoke

on the Journal, the Tristate Conference held by New York, New Jersey and Pennsylvania, at which were discussed the problems of nursing, licensing private hospitals and uniform legislation. In the state an educational program is being carried out. Radio talks on health subjects are being sent to the newspapers of the state for publication. The members were requested to prepare such talks for broadcasting Friday evenings.

Bills affecting the medical profession have been introduced into the Legislature, among them being Assembly No. 199, 193 and 296, allowing the various cults to practice medicine and one bill would allow the special licensing of "blind men" as chiropractors. These bills should be defeated.

Dr. Robert Kilduffe gave a scholarly and interesting paper on "Medical Education of the Public" which will be published in the Journal.

Dr. Dandois reported a rare case of "tularæmia", supposed to be the first one ever met with in this state, and which is an infectious disease contracted from wild rabbits. This case is being given careful investigation by Drs. Dandois and Kilduffe and results will be published later.

The Woman's Auxiliary to the county society met in an adjoining room and was addressed by Dr. Reik.

A wonderful repast was served at the Golf Club and the society adjourned to meet in May at a place to be selected by the President.

ESSEX COUNTY

John J. Connolly, M.D., Reporter

The Essex County Medical Society held its regular meeting, Thursday evening, March 8, in the auditorium of the Academy of Medicine.

Dr. Max Danzis presided. Reading of the minutes was dispensed with, as well as the regular order of business. It was an open meeting, the general public being invited to attend.

Dr. Joseph Collins, of New York City, delivered an address, the subject of which was "Meet the Doctor".

In his talk, Dr. Collins endeavored to show that the great majority of physicians, chiefly those in general practice, do not carefully evaluate their compensation for service rendered, stressing the point of the general practitioner who conscientiously examines a patient for a small fee, and if an operation is necessary refers him to a surgeon or a specialist who collects an extremely large one.

He believes that the solution of many of the economic problems of the physician can be eliminated by group practice, which he heartily endorses.

Dr. Thomas W. Harvey, dean of the medical profession in the Oranges, was guest of honor at a testimonial dinner at the Hotel Suburban, East Orange, Friday evening, March 9. He completed 50 years of practice on March 1. The dinner was attended by 200 guests, of whom more than half were professional men.

Dr. Richard D. Freeman, of South Orange, was toastmaster. A radio set was presented to Dr. Harvey. It bears a gold plate inscribed with the insignia of the medical profession above the Latin words, "In this sign he conquered".

Dr. Walt P. Conaway of Atlantic City, President of the New Jersey State Medical Society; Dr. Max Danzis of this city, President of the

Essex County Medical Society; Rev. Dr. Charles T. Walkley, Rector of Grace Episcopal Church, Orange; and Hendon Chubb, President of the Welfare Federation of the Oranges; responded to the toasts.

Dr. Harvey is past president of both state and county organizations. In responding, he reviewed the history of the last half century in the development of science in medicine. He told particularly of the expansion of hospital facilities in the Oranges. The general trend of the profession was discussed.

Section on Obstetrics and Gynecology, Academy of Medicine of Northern New Jersey

H. A. Schulte, M.D., Secretary

A stated meeting of the Academy of Medicine of Northern New Jersey on February 23, 1928, was well attended. It was held under the auspices of the Section on Obstetrics and Gynecology. The President of the Academy, Dr. Francis R. Haussling, occupied the chair.

The following were unanimously elected to membership: A. Wolfson, D.D.S., of Newark; Abraham E. Jaffin, M.D., of Jersey City; Felix Baum, M.D., of Newark.

The speaker of the evening was Benjamin P. Watson, M.D., F.A.C.S., F.R.C.S., Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University, and Director of the Sloane Hospital for Women, New York City. His subject was "Recent Views on and Experiences in the Etiology and Treatment of Puerperal Sepsis".

Dr. Watson pictured clearly the changes occurring in the normal puerperium and how infection spreads through the lymphatics from the uterus and through the peri-uterine veins.

In the way of prevention, he mentioned such things as having the patient approach labor in good condition, with any foci of infection such as carious teeth, eradicated; he also emphasized the treatment, early in pregnancy, of infections of the cervix and vagina. Dr. Watson stressed the importance of good delivery technic and pointed out that complete masking of the mouth and nose of the operator was a vital necessity. Cultures from noses and throats of hospital attendants and inmates should be made regularly during winter months at least. The abnormal cases should be diagnosed early and cesarean section done when indicated. Vaginal examinations and even rectal examinations should be limited and the course of the labor should, as much as possible, be determined by abdominal palpation. In management of the third-stage it is important not to force the cervix down to the vulva, when it can draw infection up as it recedes. Retained pieces of placenta and membranes should not be removed manually.

In the treatment of sepsis, fresh air, proper rest, a sustaining diet and good nursing are all important. A specific treatment does not seem to have been found. In the epidemic in the Sloane Hospital a year ago most of the cases with a positive blood culture of *Streptococcus hemolyticus* died; the others recovered. Three measures were used during this epidemic: (1) Quinin bihydrochloride, 5 gr. in 100 c.c. of sterile water intramuscularly; (2) antistreptococcus serum in 100 c.c. doses intravenously; and (3) blood transfusions every few days.

The serum might be given typically 12 to 24 hours after the quinin and then alternately with it every second day.

Cultures need not be made from the cervix as this manipulation increases the danger to the patient, but they may be taken from just within the labia. Several interesting slides were shown.

The discussion was opened by Dr. Edward J. Ill, who described his well known and successful treatment for early cases of sepsis, inserting a tube almost to the fundus, packing the uterus and vagina gently with iodoform gauze, and injecting 60 c.c. of 20% alcohol solution every 2 hours at first.

The discussion was continued by Drs. Samuel A. Cosgrove, of Jersey City, Richard J. Brown, of Newark, and Arthur W. Bingham, of East Orange.

Dr. Watson's paper will be published in the near future in the American Journal of Obstetrics and Gynecology.

HUDSON COUNTY

M. I. Marshak, M.D., Reporter

The Hudson County Medical Society met at the Carteret Club, Jersey City, March 6, with Dr. S. R. Woodruff presiding.

Dr. Linsly R. Williams, Managing Director of the National Tuberculosis Association and Director of the New York Academy of Medicine, gave a talk on the "Need of the Early Diagnosis of Tuberculosis". Twenty years ago, sanatoriums reported that 10% of their patients were early cases. Now these institutions, augmented many times in both size and number, can report only 14% under this classification. Why, if the death rate has gone down and the probable number of total active cases are decreased, has there been so small an increase in the percentage of early cases in these institutions? Is it because of lack in early diagnosis? What is wrong with early diagnosis? Is it, in most cases due to the fact that patients are not seen early enough? Do patients stay away because they are afraid to be told that they have tuberculosis?

An intensive educational campaign of education is necessary in order to bring these matters before the public. The profession cannot ethically take up these matters, so the lay health organization has decided to do it. The National Tuberculosis Association, in order to remedy the situation, has embarked on a nation-wide month of propaganda with the slogan "Let the Doctor Decide". They feel that the only way to induce patients to have an early diagnosis is to educate the public to the necessity of examinations whenever the syndrome of loss of weight, loss of pep, loss of appetite, and presence of cough, are noted.

Dr. Williams deplored the lack of moral and mental stamina in some physicians which prevented early knowledge of tuberculosis being presented to the patient and the proper treatment promptly instituted. He stressed the importance of good history and a complete physical examination with the patient unclothed. If one has not the time to make a thorough examination at the first visit, an appointment for such an examination should be made for another time. If he has no inclination for this type of work or fears to inform the patient of his findings, let him avail himself of agencies which will be only too glad to do that work.

The National T. A. Film—"The Doctor Decides"—was then shown, following which Dr. B. S. Pollak spoke. He cited the following statistics: 1906-7, Jersey City with a population of 212,000 had 597 deaths from tuberculosis; 1926, Jersey City with a population of 327,000 had 288 deaths from tuberculosis, and said, "if the practitioners cannot afford to give the necessary time to make a diagnosis early, they should take advantage of the tuberculosis clinics. Here the patient will be worked up for for a diagnosis and will be returned to the doctor with a report and recommendation as to the proper handling of the case. "When symptoms persist, despite a negative result from the examination, all steps must be taken to confirm the diagnosis. The salvation of the tuberculosis problem depends on seeing cases early." He quoted from Lyman: "We must not say that any case of tuberculosis cannot be helped."

Drs. A. E. Jaffin and M. I. Marshak discussed the subject.

Dr. Conaway, President of the State Society, was introduced by Dr. Woodruff. He spoke briefly on the program of activities of the society, propaganda for periodic examinations, the census of crippled children, annual re-istration of physicians, and the various modes of insurance issued under the State Society group plan. He urged some definite action be taken to build a Home for the society and mentioned the educational talks given over WPG every Friday evening by the Executive Secretary. He also spoke of the Women's Auxiliaries and their progress, following which he read the tentative program for the meeting in Atlantic City in June.

According to the constitution of the Hudson County Medical Society, the Nominating Committee made the appended report.

President, W. J. Sweeney; Vice-President, A. E. Jaffin; Secretary, Harry J. Perlberg; Treasurer, Chas. B. Kelley; Reporter, M. I. Marshak.

Trustees: G. K. Dickinson, Jos. F. Londrigan, J. J. Quigley, B. S. Pollak and John Nevin; terms to expire 1929.

Censorship: W. L. Williamson; term to expire 1931.

Scientific Committee: Frank Pearlstein, W. W. Maver, and Geo. Ginsberg; terms to expire 1929.

Membership Committee: L. A. Pyle, chairman, B. Kooperman, W. N. Barbarito, Ballinger, Marks, Weiss, Joseph Koppel, Brooke, Doran, C. P. Opdyke, Broesser, Eckert, Kolb, O'Connor, Frank, Justin, Geo. Sullivan, Street, Tidwell and Coughlin.

Welfare Committee: B. S. Pollak, Klaus and Pisworski; terms to expire 1931.

Publicity Committee: J. J. Quigley, term to expire 1929; J. A. Edgar, term to expire 1930.

Publications Committee: S. Cosgrove, S. R. Woodruff, W. T. Callery and S. Selinger; terms to expire 1931.

Permanent Delegates: Wm. Friele, Henry Klaus and George Ginsberg.

Annual Delegates: Daniel B. Street, Earle Halligan, Louis Lange, Morris Frank, Thomas Coughlin, T. J. Schuck, Louis A. Pyle, Margaret Sullivan, William Callery, John J. Pagliughi, Ernest Thum, Maurice Shapiro, W. J. Matthews, John H. Jentz and J. Eckes.

Member of State Nominating Committee: Stanley R. Woodruff.

North Hudson Hospital Clinical Society

Reported by Henry Klaus, M. D.

The regular meeting of the Clinical Society was held at the North Hudson Hospital on Tuesday, February 21, 1928, Dr. Klaus presiding. There were 37 present. The minutes of the previous meeting were accepted as printed in the Bulletin. The Treasurer's Report was read and showed a surplus of \$509.70.

Dr. Sweeney, as Chairman of the Laboratory Committee, discussed the pathologic and x-ray laboratory. He said the x-ray laboratory was showing remarkable progress and asked that it be supported by all as it is not in competition with any of the outside men maintaining private laboratories. The pathologic laboratory has a flat rate on all pathology and he asked that it also be supported, especially by the Medical Staff. The Chairman elaborated on some of Dr. Sweeney's remarks.

Dr. Klaus discussed the rates of the new building; \$8 for a private room and \$7 for a double semi-private room. Dr. D'Acerno thought the rates excessive. Dr. Lange and Dr. Kuhlmann thought these rates were necessary because of the upkeep of the Hospital and the increase of floor nurses. Dr. Klaus spoke of attendance at the Clinical Society meetings and said that 75% would be necessary for a doctor to be in good standing. There was a discussion of the reports of communicable diseases. Pneumonia is classed as a communicable disease and should be reported.

There was a complete analysis and statistical report of the service of Dr. De Meritt.

Case Presentations

(1) "Pancreatitis Associated With Chronic Cholecystitis and Cholelithiasis", by Lange.

Patient admitted January 5, 1928, discharged January 28, 1928. Age 41. Original diagnosis of gastric ulcer, perforated; cholecystitis acute. Final diagnosis, cholecystitis acute, cholelithiasis, pancreatitis acute.

Chief Complaint: Pain in right and left upper abdomen; vomiting.

Last 2 years patient has had attacks of pain in the epigastrium, no relation to meals, radiating to shoulder and to the back. Has had to be careful about diet. Jaundice in the past. For 2 or 3 weeks severe attacks of pain in the same site with same radiation. Last night and this morning especially severe, patient doubled up and vomiting yellowish fluid. Had to remain in bed. Pale, dyspnea, and a yellow tinge to the face. Bowels constipated. There was rigidity over the upper abdomen. Tenderness exquisite over the epigastrium and over the gall-bladder region. No tenderness over the R. L. Q., or L. L. Q. No masses in liver, spleen or gall-bladder. No distension.

Head: Eyes react to light and accommodation. Ears negative. Nose negative.

Mouth: Some teeth carious. Tongue slightly coated.

Neck: No rigidity.

Chest: Heart-sounds good quality; no murmur, no enlargement. Lungs—normal resonance, no râles on auscultation.

Abdomen: Negative except as noted above.

Extremities: No pathological reflexes present, no edema.

Blood count: W. B. C. 18,000, polys. 95%.

Urine: Trace albumin, few granular casts.

Operation: Free bile-stained fluid in region of

gall-bladder and liver. Peritoneum edematous. Gall-bladder somewhat thickened and injected, containing stones. No stones in common duct. Pancreas very thick and hard about 2¾ in. wide and 1½ in. thick. No areas of necrosis of pancreas seen. A cholecystostomy was performed with drainage.

For first 4 days vomited excessively, was quite distended, and had considerable pain. Gastric lavage, hypodermoclysis and enemas given with eventual relief. Discharged January 28, 1928 as cured.

(2) "Pancreatitis Associated With Chronic Cholecystitis and Cholelithiasis", reported by Dr. Tannert.

Provisional diagnosis: Acute cholecystitis or exacerbation of chronic cholecystitis. Acute pancreatitis.

Final diagnosis: Cholecystitis, acute catarrhal. Pancreatitis secondary. Cholelithiasis.

Chief complaint: Pain over upper abdomen. Vomiting. Chills.

Attack of severe sudden pain in right upper quadrant, radiating to shoulder and back. This occurred for the first time on Christmas Eve. Also vomiting. Had similar attacks for previous 3 days. Pain then spread all through abdomen and doubled her up. Had never been jaundiced, but could never eat fatty foods. Other history irrelevant.

Patient presented picture of acute abdomen, lying in bed with legs drawn up and in extreme pain. Diffuse rigidity of abdomen present. Extreme tenderness in epigastrium. Rectal examination negative.

Heart: Systolic murmur. Rate 124. Not enlarged.

Chest: Few râles, right upper.

Extremities: Negative, no abnormal reflexes.

Laboratory findings: Blood, W. B. C., 14,800; 92% polys., Hb. 90%.

Urine: Albumin, trace. Sugar 1.1%. Bile positive.

Patient removed to operating room January 3 for laparotomy under ether anesthesia.

Free fluid, bile tinged, in region of gall-bladder. Retroperitoneal tissue edematous. Pancreas thick, hard and much enlarged. No visible gangrene. Gall-bladder wall thickened and many small and large stones felt. Gall-bladder emptied on pressure. Gastroheptic omentum thickened.

Peritoneum incised over pancreas and cigaret drain introduced to this point. Gall-bladder opened, stones removed with scoop and tube inserted and sutured in situ by purse string inversion of gall bladder wall. Cigaret drain to epipolic foramen. Closure as usual.

Immediately after operation patient had severe abdominal cramps. On second day she started to vomit but this stopped after gastric lavage. Retention enemas were given immediately postoperative and continued for 4 days. The wound discharged very little, abdomen remained soft, and on fourth day postoperative the drain to the epipolic foramen was removed. On this day she started to drain through the cholecystostomy tube. Convalescence was uneventful with exception of slight nausea at times. Enemas given as necessary. On fourteenth day postoperative, the tube to the gall-bladder and drain to the pancreas were removed and on the seventeenth day the dressing was clean and patient very comfortable. On the twentieth day she was allowed to

sit up, and on the twenty-fourth day was discharged as cured.

"Chylorisis Mesenteric Cyst", reported by Dr. W. J. Sweeney. Patient, aged 47, born in Germany, was admitted to medical service of Dr. Spalding, April 1925, suffering with recurrent asthma. Transferred to surgical service of Dr. Sweeney, with diagnosis of chronic cholecystitis.

Operation: Cholecystectomy and appendectomy, April 27, 1925. Uneventful recovery and restoration to health as he returned to work and no further complaints until July 1927, when he was hit by an auto while crossing street and he dates his present illness from this accident.

After making "the rounds" from July to December he was readmitted December 27, 1927, to North Hudson Hospital because of incisional hernia and mass in L. L. Q. which was diagnosed at Bellevue Clinic as possible tumor of lower bowel, on the basis of bismuth enema x-ray (letter sent to North Hudson Hospital from Bellevue). This mass was size of orange, freely movable, not attached to overlying skin, no palpable mesenteric or inguinal glands, no pain or tenderness on percussion. Hemoglobin 88%; R. B. C. 4,500,000; constipation chronic but more marked for past four months, 20 pounds loss of weight since accident in July. In R. U. Q., in line of the previous incision, the wall is thin due to muscular deficiency and on coughing, bowel protrudes, it disappears on lying down and reappears on standing up. A laparotomy decided upon to repair hernia and to explore mass, December 28, 1927. Preoperative diagnosis, incisional hernia and tumor of large bowel. Under regional anesthesia and gas-oxygen, old scar dissected out, many adhesions of intestines to old scar of healed peritoneum and surrounding structures freed. Exploration of mass disclosed a large necrotic mesenteric cyst size of orange about the middle of ileum. Abdomen filled with fluid and numerous other small glands in mesentery; cyst enucleated and peritoneum repaired. Diagnosis of T. E. cyst made. January 4, 1928, or 7 days after operation, partial obstruction noted and as this became progressively worse it was decided after consultation to again operate to relieve the obstructive symptoms. A palliative colostomy was done January 7, 1928, under local infiltration in L. L. Q.; the gut was found enormously distended above site of obstruction. Obstruction was due to gluing of gut by adhesions to site of cyst which shifted out. Large rubber tube inserted for drainage. Patient expired January 10, 1928, general toxemia.

Autopsy revealed distended gut, adhesions to sites of enucleated cyst and to adjacent large bowel—free fluid—many mesenteric glands.

Pathologic report: Chylorisis cysts, 40 mm. diameter, wall thin and pale, contents putty, fatty substance, soluble in water. No organized structures on staining.

Ewing describes chylorisis cysts as very large single multilocular tumors or numerous small swellings, contents are clear fluid or chyle or inspissated fat. Walls are fibrous tissue, many round cells or lymph follicles. Lining is endothelium, may be hyperplastic.

Kleen and Rittner interpret all mesenteric chylorisis cyst as lymphangioma.

(4) "Convulsions Due to Thymic Enlargement", reported by Dr. Tidwell. A. G., a male child of 7 weeks was admitted to the hospital January 20, 1928, with convulsions.

First child, full term, normal delivery. Breast fed until January 16, when it was put on a for-

mula. Child has had a cold since birth with difficult breathing and choking at times.

On January 13, a week prior to admission, had a convulsion which disappeared without treatment. Three days later started with convulsions again which were more or less continuous, until admission to hospital.

Well nourished child, anterior fontanelle 4 fingers open. In almost continuous convulsions of mild nature, consisting of fine twitchings of eyes and face muscles and both extremities. Breathing was somewhat irregular. Heart action regular and of good quality. Some cyanosis present. Abdomen soft. Liver felt just below the costal margin. Spleen not felt. Reflexes exaggerated.

The temperature was 98.8°. Respiration 40. The urine negative with the exception of a few pus cells. Blood count, Hgb. 80%, R. B. C. 4,200,000, color index 95, W. B. C. 11,900, Polys. 26%, monos., 74%. A provisional diagnosis of enlarged thymus was made and the child sent for x-ray examination. The report read, "thymic and cardiac enlargement". The convulsions were fairly well controlled by chloral per rectum. The next day the baby was discharged in order to go to Dr. Broeser's office for x-ray therapy. Returned home and was taking formula well and resting quietly until 11 o'clock that night when the convulsions recurred, and was readmitted to the hospital. It had 4 convulsions that night. On the twenty-second there were no convulsions, it took the formula well and seemed improved. On the twenty-third the temperature rose suddenly to 105° but came steadily down and on the twenty-fourth was 98°. Dr. Bell saw the child with me on that day and concurred in the belief that the temperature was reaction from the x-ray therapy inasmuch as it had remained normal, and no other cause could be found. On the twenty-fifth the child seemed much improved, it had gained in weight, was taking the formula well, and the temperature was normal. At 7:30 that night the baby was discovered dead.

Final diagnosis, static lymphaticus with thymic enlargement. Autopsy was refused.

Discussion. Dr. Stein thought where symptoms occur intensive treatment should be given. Patients are liable to die suddenly. Always look for an increased lymphocytosis. Dr. Kerdasha thought where convulsions occur spinal puncture should be done to rule out cerebral hemorrhage due to trauma. Dr. Pearlstein questioned the enlargement of the thymus; it might be an enlarged gland. Dr. Tidwell said that no puncture was done because diagnosis was made and treatment started immediately.

(5) "Coincident Typhoid and Lobar Pneumonia in Girl Seven Years of Age", reported by Dr. J. M. Stein. Family and past history have no bearing on present condition.

This patient became suddenly ill on October 11, 1927, with high fever (105.5°), vomiting and prostration. Physical examination disclosed nothing except slight reddening of throat. This condition continued for 3 days. Repeated examinations showed no further signs. Admitted to hospital October 14. Physical examination disclosed no signs of meningeal involvement, heart and lungs were negative, liver and spleen not palpable. Blood examination: Hemoglobin 80%, R. B. C. 3,500,000, W. B. C. 26,000, polys. 90%. Widal negative. Blood culture produced a growth of typhoid bacilli. Urine examination showed 1% albumin, granular and hyaline casts.

October 15, enema yielded tarry stool, positive

test for blood. Temperature ranged from 104 to 106°. Pulse 130-160. Respiration 30-45.

October 17, 1927, examination of chest showed dullness on percussion and bronchial breathing on left side posteriorly, over an area from seventh to ninth rib. Blood examination showed W. B. C. 19,000, polys. 83%. Stool examination, positive for typhoid. Occasional slight cough.

October 18: Crepitant râles were heard over above mentioned area. Temperature fell by crisis that night.

October 29: Temperature, pulse and respiration normal.

October 21: Widal positive. Stool positive. Convalescence was uneventful. Discharged from hospital October 30. Examination of stool was negative October 24 and November 1, 1927.

Comment: This case presents several interesting features. (1) The course of the lobar pneumonia which did not give characteristic signs until the sixth day from onset and 1 day before the crisis. The absence of typical breathing and of cough. (2) The masking of typhoid symptoms and the absence of usual signs such as enlarged spleen, rose spots and characteristic stools. (3) The paradoxical blood findings; high leukocytosis and typhoid bacillemia.

In children lobar pneumonia not infrequently presents difficulties in diagnosis. Physical signs are not as definite as in the adult. Symptoms—breathing, cough and pleuritic pain—may be absent, or atypical, particularly in those types of pneumonia involving only part of a lobe, sometimes referred to as central pneumonia, but usually affecting a wedge-shaped area.

Typhoid fever in children is apt to run a more acute and shorter course (1 to 2 weeks) than in adults. In this case the typhoid was completely overshadowed by the pneumonia. In the absence of a blood culture the diagnosis would not have been made. As far as welfare of the patient was concerned, the diagnosis of typhoid would not have mattered one way or another, but from a public health standpoint the results from an undiagnosed case of typhoid might have been very serious.

The blood findings in this case were extremely interesting. One is impressed with the great value of blood cultures and with the thought that we should not be too dogmatic about any one aspect of a blood examination. In this case the fact that we had a high leukocytosis did not necessarily preclude existence of a disease which uncomplicated gives a leukopenia.

(6) "Case of Diabetic Coma with Recovery", reported by Dr. J. M. Stein.

I was called to see this patient, a girl 12 years of age, on November 30, 1927, at 10 a. m. Another doctor had made a diagnosis of pneumonia at 7 a. m. I found the patient in coma, pupils dilated, pulse 110, temperature 97.2°, acetone odor to the breath, and typical air-hunger breathing. This condition had existed about 12 hours. Physical examination showed under nutrition, heart and lungs negative.

Previous history: Patient had lost about 10 lb. in the last 3 or 4 months. Was fond of sweets. There was an indefinite history of polyuria, polyphagia, polydypsia.

A diagnosis of diabetic coma was made and patient was sent at once to hospital. Urine contained 3.5% sugar. Blood sugar 335 mgm. per 100 c.c. The following is a synopsis of the treatment and progress in this case:

11:15 a. m. Insulin, 40 U. Water, coffee, broth by mouth.

1:30 p. m. Insulin, 20 U. 1000 c.c. normal saline and 3% glucose, equal parts, subcut. coffee 3 ounces.

3:00 p. m. Insulin, 20 U.

4:30 p. m. Insulin, 10 U. Orange juice. Breathing easier; semiconscious.

7:00 p. m. Semicomatose.

8:00 p. m. Insulin, 10 U. An intravenous sol., 400 c.c., of 20 gm. sod. carbonat., and 15 gm. dextrose; patient became conscious and breathed much easier.

8:45 p. m. Water by mouth.

10:20 p. m. Insulin, 20 U.

11:00 p. m. Normal saline, 500 c.c., hypodermically.

On the next day, Dec. 1, 1927:

1:00 a. m. Orange juice; water ad. lib.

10:00 a. m. Insulin, 20 U. Sugar 3.5%, acetone and diacetic acid positive.

11:00 a. m. Orange juice, 2 ounces.

12:30 p. m. Sugar 2.8%.

12:40 p. m. Insulin, 20 U.

2:00 p. m. Insulin, 20. Oatmeal gruel, 3 ounces.

2:30 p. m. Buttermilk, 1 ounce, sugar 2.8%.

4:15 p. m. Insulin, 10 U. Spinach, 2 ounces.

5:00 p. m. Sugar 0.6%.

December 2, 1927:

4:00 a. m. Patient bright.

8:30 a. m. Coffee.

9:30 a. m. Buttermilk, 2 ounces.

11:45 a. m. Insulin, 10 U. 12 M.—Vegetables.

4:00 p. m. Buttermilk, 1 ounce.

5:00 p. m. Insulin, 10 U. Sugar 2.3%.

On December 3, 1927, a diet was prescribed (patient's weight 31K), consisting of 40 C—60 P—100 F, with a caloric value of 1300 cal. Insulin 10 U. t.i.d.

Dec. 5, 1927. 24 hour urine contained 17.4 gm. sugar. Insulin increased to 40 U. daily.

Dec. 6, 1927. Urine sugar free.

Dec. 8, 1927. Gained 2 pounds since admission.

Dec. 10, 1927. Blood sugar 125 mgm. Insulin reduced to 30 U. daily.

Dec. 12, 1927. Gained three-quarters of a pound. Insulin reduced to 25 U. daily.

Dec. 15, 1927. Insulin reduced to 15 U. daily. Sugar free.

Dec. 18, 1927. Insulin discontinued.

Dec. 19. Trace of sugar appeared in urine. Was placed on 10 U. insulin daily. Discharged improved.

Comment: This patient was admitted in diabetic coma on November 30, 1927. Under treatment the coma and acidosis cleared up in 2 days. On the fifth day the patient was placed on a proper diet for maintenance and growth, and was sugar free. On the nineteenth day when patient was discharged she had gained 3 lb.

Although diabetes in children is relatively rare, one should always bear it in mind in arriving at a diagnosis in a patient in coma. Treatment must be prompt and very carefully controlled, for in giving insulin we must beware of the danger of producing hypoglycemia. In this case, catheterized specimens of urine were examined before

each injection of insulin in the first 24 hours. In prescribing a diet for a diabetic child, due allowance must be made for growth as well as for energy requirement. The diet must also be carefully balanced according to its ketogenic-antiketogenic content. In this diet the ratio was 85:115. This diet contained 40 C—60 P (2 gm. per K)—100 F. Its caloric value was 1300 (40 per K). During her stay in the hospital the patient was carefully trained how to select, weigh and measure her diet. She was also taught how to test her urine for sugar.

(7) "Regional Anesthesia in Operations on the Spinal Column", reported by Dr. Kuhlmann. Presenting 2 cases which illustrate the use of regional anesthesia in operations on the spinal column, the first being a fusion according to the method of Hibbs and the second an Albee tibial graft.

Case 1. F. S., aged 35 years, 18 months ago began to experience girdle pains around lower thorax. Three months later a kyphosis appeared with apex at the seventh dorsal spine. During this time he lost much weight and on several occasions spat bright red blood. He was placed on a convex frame for 3 months, a cast was applied subsequently and he was sent to Glen Gardner for a period of 6 months. On his return, January 7, he had gained much weight and felt well. The kyphosis was still present but the girdle pains had disappeared. A Hibb's fusion was done under paravertebral anesthesia, the fourth to tenth dorsal spinal nerves being blocked on both sides; 6 c.c. 1% novocain-adrenalin injected into each spinal nerve, making a total of 90 c.c. and 100 c.c. of 0.5% solution were used to infiltrate the muscles. The operation consumed 1 hour and 40 minutes and during this time the patient never complained of the slightest pain or inconvenience.

Case 2. N. T., age 31. Since childhood had tuberculosis of the left knee. Six months ago began to lose weight, and experienced pain in lower back. Examination revealed marked emaciation, many moist râles at both apices, positive sputum and marked kyphosis with apex at the fourth lumbar vertebra. The patient was put on a convex frame in the open air for 3 months; râles disappeared and sputum became negative; the general health and weight improved and the kyphosis decreased perceptibly. On January 27, the lumbar spinal nerves 1-5 and sacral 1-3, were blocked, and an Albee graft was removed from the right tibia and placed into the split spines. Time consumed, 1 hour and 15 minutes. Quantity of solution used—90 c.c. 1%, 90 c.c. 0.5% novocain-adrenalin. No pain was felt at any time during the operation and anesthesia was still complete at the expiration of 1½ hr. It is of interest to note that in this case blocking of the diseased spinal area also served to block impulses from both legs, so that no additional anesthetic procedure was necessary to block the area from which the tibial graft was taken.

In both cases indication for use of paravertebral anesthesia was a definite one, viz.: the presence of recent active pulmonary tuberculosis. It is no exaggeration to state that the subjection of such patients to ether, chloroform or even gas-oxygen anesthesia over a period of time varying from 1 to 2 hr. is very damaging to the pulmonary tissues, and the advent of regional anesthesia has therefore removed one of the great hazards which these patients formerly were constrained to undergo. Moreover, it is not only in this type of case that a great danger has been removed. Cases of marked rotary scoliosis, particularly

those due to infantile paralysis, with poor general physical development, markedly decreased lung capacity and impaired myocardial reserve, are also spared a real risk when subjected to an extensive spinal fusion. A third type of case in which paravertebral anesthesia might mean the difference between life and death is that of dislocation and fracture-dislocation of the cervical vertebrae, in which the struggling incidental to administration of a general anesthetic is exceedingly dangerous.

(8) "Pulmonary Abscess After Tonsillectomy", reported by Dr. H. Klaus.

A. K., age 38 years, admitted to North Hudson Hospital August 31, 1927, with the history of having had a tonsillectomy performed in April, 1927, about 4½ months before admission. Two weeks following this operation she became violently ill with fever, chills, pain in the right chest, coughing and expectoration of muco-pus, but at no time in considerable amounts. After an acute illness which lasted about 2 weeks she improved considerably, but from that time on she has had a constant cough with moderate expectoration and attacks of fever at various intervals. No night sweats but her sputum has been blood streaked frequently of late. During the 2 weeks preceding admission she again suffered a febrile attack with much pain in the right chest posteriorly. Examination showed dullness over the right chest posteriorly from the fifth rib down and extending forward to about the anterior axillary line, with diminished breath sounds over this area and occasional few râles. There was some tenderness to pressure in the midaxillary region. The fingers already showed a slight clubbing. W. B. C. 17,400 with 80% polys. Numerous sputum examinations were negative to tubercule bacilli. Radiographic examination showed a circumscribed area of density in the middle lobe reaching out to the periphery of the lung but no fluid level present. Stereoscopic plate would have located the abscess more exactly in its relationship to the anterior or posterior chest wall and extent of its pleural attachment but after 2 exploratory punctures it was found to be located just external to the anterior axillary line in the fifth space.

Operation. September 3, 1927, under local and gas-oxygen anesthesia, thoracotomy by resection of 4 inches of the fourth and fifth ribs from the anterior axillary line posteriorly through a large curved incision under the right breast. The lung was found firmly adherent to the pleura at this site and the abscess was then located by an aspirating needle. With this as a guide, the abscess was freely opened and about 3 oz. of pus evacuated. During this procedure a small opening was made in the pleural cavity at the periphery of the abscess. Two tubes were inserted into the abscess cavity and the entire cavity and wound packed with strips of vaseline gauze. A few skin sutures were inserted. During operation several large bronchial openings were noted in the wall of the abscess cavity.

In spite of the profuse drainage from the abscess she ran a long and protracted temperature for 4 weeks, when it reached about normal. The wound had closed considerably but a small bronchial fistula was present. There was no expectoration and she felt quite well, being up and about. The temperature again rose and, upon examination, over the right base an exudate was noted which upon aspiration proved to be pus. Three inches of the eighth rib was resected posteriorly and the abscess cavity entered with evacuation of 6 oz. foul pus. Also 2 in. of the

seventh rib was removed. Although at this time no opening into the lung was noted, subsequently, upon irrigation of this cavity, fluid passed directly into some bronchus and was expectorated, showing clearly that we were dealing with an empyema which had broken through from the pulmonary abscess and not one due to a secondary pleural infection.

Following the second operation, her temperature fell to normal within 5 days and remained so. The posterior wound rapidly closed within 3 weeks, and she was discharged November 23, 1927, with the anterior wound still open and slightly discharging from a small bronchial fistula. This fistula has now entirely closed but there is a small area of skin which has not completely healed over the former large operative wound beneath the breast. Since discharge from the hospital 3 months ago she has remained perfectly well and entirely free of any pulmonary symptoms.

Radiographic examination made January 12, shows some slight evidence of fibrosis in the right lower pulmonary field but no infiltration or consolidation.

Comment: This case is presented first because of the unusual number of postoperative pulmonary complications noted in general surgical procedures during the past few months in spite of the most approved methods of anesthesia and in one instance where no anesthetic was used; second, because of the radical change of opinion as regards etiology of pulmonary abscess since the publication of Schlueter and Weidlein's work from the Lakeside Hospital and Western Reserve University Medical School, which appears in Archives of Surgery, Vol. 14, 1927; third, the choice of procedure in treatment.

Two types of abscess are recognized, bronchiectatic and extrabronchial or parenchymatous. The position assumed by the infecting organisms determines the type of abscess that is to follow. The first type originates within the air passages while the second begins within the parenchyma of the lung. Each type is dependent on a separate and distinct mechanism by which the infection is brought to site of implantation. In the bronchiectatic abscess transmission is by way of the air passages, while in extrabronchial abscess it is by way of the blood stream.

The work of Schlueter seems conclusive that postoperative lung abscess is of embolic origin. They were unable to produce a single pulmonary abscess in animals by intrabronchial injections of various foreign bodies and organisms. These substances were not injected but placed and packed directly into the bronchi, in addition to applying trauma. The material was invariably coughed up within a few days. The bronchoscopist tells us that lung abscess is rare with the lodgement of foreign bodies and that the little pathology that exists immediately clears up upon its removal. On the other hand Schlueter was able to produce abscess of the lung in 26 experiments in a series of 41 cases by the introduction of infected emboli into the blood stream. The high percentage of lung abscess following tonsillectomy can readily be appreciated as these tonsils are usually infected and the ease with which the infection can enter the large vessels of the neck is patent. Local anesthesia is no preventive, as is shown by many writers, and in one series of 202 post-tonsillectomy lung abscesses, 39 followed local anesthesia. Moreover, many pulmonary complications are noted following obstetric, gynecologic and general surgical pro-

cedures under local anesthesia; which seems to make conclusive their embolic origin.

The treatment of lung abscess is simply one of drainage, whether this can be obtained by internal drainage through the natural air passages or by external drainage by surgical measures. If the abscess is centrally located and has free communication with a bronchus, posture may suffice to cure it. Pneumothorax treatment has no advantages over the bronchoscopic method and is not without danger; moreover, the lung must be free to allow collapse. The case here reported was one absolutely for external drainage inasmuch as it was a peripheral abscess and had no free communication with a bronchus. There was little expectoration at any time, nor was there a fluid level; showing no air was able to enter through a bronchus.

Discussion: Dr. Lange asked whether there were any physical signs in the chest at the present time. Some of his cases showed signs in the chest some time after the operation. Dr. Comora discussed whether a lung abscess is due to aspiration or embolism. In the Mayo's report they think it due to aspiration. Dr. Pearlstein said the patient showed symptoms two weeks after operation. As to whether the cause is aspiration or embolic it is not settled. Dr. Klaus in closing said that at the present time there was no evidence in the lung except fibrosis. He believes that embolism is the chief cause of lung abscess after tonsillectomy.

The meeting closed at 11:30 p. m. and a collation was served.

MERCER COUNTY

A. Dunbar Hutchinson, M.D., Reporter

The Mercer County Medical Society held a regular meeting on March 14 in the Carteret Club, President Sista presiding.

Dr. Lawrence K. McCafferty, of New York, spoke on the 'subject of some of the "Newer Treatments in Dermatology". Dr. McCafferty referred to the several methods in the application of electricity, x-rays, carbon-arc light, infra-red rays or heat rays, and many of the recently discovered drugs that are now recognized as routine treatment in the more common skin diseases.

A very comprehensive table showing the relative expenditures by the public for cosmetics, was shown, and emphasized in detail by Dr. McCafferty. His discussion of many of the common skin diseases was intensely interesting and very instructive.

Dr. Oswald Lowsley, upon being introduced, commented upon the ability of man to attract attention by display of his wares, and proceeded to show and describe several very cleverly designed instruments, of his own invention, used in the practice of his specialties, genito-urinary diseases.

Dr. Lowsley described in detail the several slides shown on the screen, and emphasized the importance of early diagnosis of disease in this particular part of the body.

Medicinal and surgical treatment were very interestingly described in the many instructive cases detailed, the subject bringing forth much spirited discussion.

The application of Dr. Samuel Cochran, of Lawrenceville, was presented and Dr. Cochran unanimously elected.

Applications of Drs. W. D. Farmer, of Allen-

town, Anthony J. Lettiere, Albert F. Moriconi, of Trenton, and Harold Crisp Cox, of Hightstown, were read and referred to committee.

Dr. Scammell referred to the death of Dr. J. H. Fretz, and paid tribute to the sterling qualities of this member. The society was unable to meet in special session following announcement of the death of Dr. Fretz; however, a floral spray was authorized, and an acknowledgment of the same received.

The President appointed Drs. Oliphant, Scammell and Schauffler as a committee to draw suitable resolutions.

Amendment to the By-Laws offered by Dr. Sommer, relative to a change in the wording of the application for membership, was moved laid over for 1 month.

Amendment offered by our watchful Treasurer, Dr. North, was explained by that very efficient official, and immediately unanimously adopted.

The Testimonial Dinner in honor of our "Veteran Members" was earnestly emphasized, in order that this event might be put across.

Report of Testimonial Dinner

The Mercer County Medical Society tendered a Testimonial Dinner in honor of its members who had been in the practice of their profession for 40 years or more.

The ballroom of the Stacy-Trent was tastefully decorated with spring flowers, and good music, vocal and instrumental, enlivened the occasion.

The guests of honor were seated at a long table while the members were arranged comfortably at smaller tables, about 125 being present.

Owing to the serious illness of a brother, Dr. Chas. R. Sista, our President, was unable to be present, and Dr. R. B. Seely, Vice-President, most ably occupied the chair and fulfilled the duties of toastmaster.

Following a very enjoyable repast, Dr. Seely informed the audience of the cause of absence of the President, and stated that Dr. Sista had hurriedly written a short speech which he desired to be read.

(Read by Dr. Seely, for Dr. Sista)

Honored Guests and Fellow Members of the Mercer County Medical Society:

It is with a great deal of pleasure and a real appreciation of the honor, that I have the privilege of presiding over this very unique meeting this evening. I want to assure you that I appreciate the honor that is mine, and take this opportunity of thanking you for the splendid privilege. I want to thank the committee who have worked diligently with me to make this evening an outstanding one in the history of our society.

The nature of the occasion that brings us together tonight is indeed unique in the history of the Mercer County Medical Society. True it is, that we have gathered upon occasions such as this to pay special honor and homage to this *one* or that *one*, but never before have we gathered at the festive board to pay tribute to 15 of our fellow practitioners, who have been the pioneers and the leaders in our profession for 40 years. It does not seem that we gather to pay tribute to this one or that one of the 15, but rather do I like to think that we are gathered tonight to pay tribute to an *Ideal*, an Ideal, that is especially exemplified by the 15 men, whom we honor tonight. The ideal of unselfish service. Forty years of devoted service to humanity is a record that any one may well be proud of. Forty years

of relieving those in distress and suffering would in itself commend these men to our love and affection, but during those 40 years they have been the bearers of the torch of professional etiquette, molding and teaching us of the younger school the high ideals of our profession and guiding us along lines of the highest ethics. During their years of practice, these men have seen many changes and much progress. When one ponders over the tremendous difficulties that they encountered in their early practice with poor roads, poor telephone accommodations, with the horse as the only means of transportation and meagre hospital facilities, and then compare the comfortable facilities that we enjoy today, which include fine hospitalization, automobiles, good roads, telephone, telegraph, we can more readily understand why these men are entitled to our esteem, and why tonight we bring them here to tell them of our esteem and respect.

As chairman of this meeting, it is not my privilege nor would I feel equal to the occasion to continue at any length upon the reasons of our being here. Suffice it for me to say to you our guests that the Mercer County Medical Society is indeed proud of you, that this large attendance upon the part of the membership is tangible evidence of their appreciation of what you have done and what you mean to our profession in this community. We thank you for accepting our hospitality and we trust that many years will be given you to continue the work that you have so nobly carried on for the past 40 years.

Honored Guests: Drs. Charles F. Adams, 1887; Henry M. Beatty, 1885; Elston H. Bergen, 1877; William A. Clark, 1879; Henry B. Costill, 1882; Nelson B. Oliphant, 1880; Gustav A. Schoening, 1883; Joseph B. Shaw, 1885; William L. Wilbur, 1888; Burr W. MacFarland, 1888; George A. Silver, 1881; Irving Townsend, 1887; Maxwell S. Simpson, 1879; George V. Van Nest, 1883; Abel T. Bruere, 1886.

A telegram from Dr. Shaw, in which he stated his regret at not being able to be present, owing to ill health, was read. Also a letter from Dr. G. A. Schoening for the same reason. Dr. E. K. Fee, not a veteran, also sent a letter of regret, and stated that he was sorry not to be able to do honor to the men who had set the pace for so many years.

The Woman's Auxiliary sent "greetings and best wishes to the Veteran Physicians", accompanied with individual rosebuds.

Dr. Daniel J. McCarthy, Prof. Med. Jurisprudence, University of Pennsylvania, was introduced by Dr. G. N. J. Sommer, and gave a very interesting recital of the phases of medical progress.

Hon. Frank S. Katzenbach, Justice of the Supreme Court of the State of New Jersey, was introduced by Dr. F. G. Scammell, and spoke in a very impressive manner, emphasizing the high ideals surrounding the medical practitioner.

Dr. Walt P. Conaway, President of the State Medical Society, was introduced by Dr. M. W. Reddan.

Dr. Conaway referred to the pioneer work of the early physicians.

Hon. Frederick W. Donnelly, Mayor of Trenton, was unable to be present.

Dr. Seely called upon each of the 11 Veterans who were present, being eligible for the honor, and many amusing incidents were recited from recollection of the early '80's.

Leather-bound menus with gilt embossed individual names and space for autographs were presented to the 15 Veterans.

Remarks of Dr. Walt P. Conaway
at the
Mercer County Medical Society Dinner

This is indeed a very pleasant occasion. I am happy to be here, and to be invited to join with you in this demonstration of good will and appreciation. My first very pleasant duty is to extend to our honored guests of the evening our cordial, friendly greetings and the hearty congratulations of the officers of the Medical Society of New Jersey, whom I have the very great honor and pleasure to represent.

In my work this year, speaking as I do before the various county medical societies, I have stressed the importance of preventive medicine, and I am sure you will be pleased tonight when I practice what I preach and, by speaking briefly, preserve in a measure the life and health of those before me. A recent book by Dr. James J. Walsh entitled "Laughter and Health" tries to prove that loud laughter is a major item in preventive medicine. By increased vibratory movements of the diaphragm it massages the liver, so to speak, and causes an increase in the secretions of many of the internal organs, relieves intestinal stasis, and thereby aids in prolonging life. To quote the Journal of the A. M. A., "The book says that—'constipated people are not prone to laughter nearly as much as others'—this is also probably true of people with diarrhea." Anyway, the book is interesting reading, leaves a better taste in your mouth than "Mother India", and I am sure cannot offend even the most chaste.

Occasions like this are productive of much good. It must be a source of great satisfaction to your guests to see so many of their professional friends gathered here from all over this county and from other parts of the state to do them honor. I take it this is simply a testimonial of your appreciation of the very valuable services rendered this community by your guests. What better illustration could we have of this very cordial and friendly feelings the members of our noble profession entertain for one another? Regardless of how uninteresting and amateurish the post-prandial remarks of some of us may sound, yet surely they are of infinitely more value to the gentlemen than a lengthy parade of many, many more of their friends and admirers all "with bowed heads, sad and thoughtful". I am a firm believer in showing our admiration and proving our friendship for our deserving brethren while they too can enjoy it and not waiting until the time comes when the best we can do is to send floral emblems representing in a measure our love and sympathy. Somehow, I never did appreciate blankets made of roses or a "gates ajar" with an inquisitive pigeon peering therein. Why, even the sight of all these friends gathered to do them honor should develop in our honored guests feelings of joy as well as aid them in digesting their well-balanced dinner. And now I am reminded of a spinster lady who called at my office complaining of either eye or stomach trouble, she did not know which. To aid me in making a diagnosis she said, "Now, doctor, there must be something wrong with my eyes or with my stomach, for when I look at you steadily for even a few seconds, it makes me feel awfully sick at my stomach". There may have been a compliment in that remark, but I did not appreciate it.

These worthy gentlemen are very much respected, admired, envied and loved by their numerous friends, patients, and by many of their professional associates. Each of our guests has had

a career of intense scientific and professional interest, and any remarks on their success are rendered the more difficult because of the richness of material provided by their individual achievements. Some of them have made many contributions to medical literature. Some have found their chosen work in teaching; some have served as members and directors of local and state health boards. Among them are surgeons, internists, oculists, otolaryngologists, neurologists, psychiatrists, bankers, politicians (only to a very limited extent, I hope), and there is one who has even achieved the enviable distinction of having had conferred on him that most worthy and entirely nonpolitical honor of the Presidency of the Medical Society of New Jersey. "'Tis a consummation, devoutly to be wished." To their early professional ideals of truth and honor and practical concern for human betterment, these men have added ideals of education and service, and tonight we have ample proof that they have succeeded better than the average in living up to their ideals. Their chief characteristics, as practitioners, apart from their profound knowledge of the healing art, have been their sympathetic kindness and gentleness to those to whom they have been summoned in times of suffering and distress.

"Men, like trees, may die at the top", but not so with our honored guests. Having relinquished to some extent the arduous duties of their profession, they now become the scholar and the man of affairs. As many of us advance in years, we become more conservative and, as a rule, perfectly content with existing conditions, but these men still have the fire and enthusiasm of youth and are not willing as yet to surrender to the inactivity and discontent of old age.

Gentlemen, we felicitate you, and we desire to bestow upon you our warmest admiration and affection. May we long have the pleasure of your friendship and the privilege of your valued counsel; may you always enjoy the best of health; may all the remaining years of your life be as radiant as the Western Sun, and may comfort and happiness abide with you always.

MIDDLESEX COUNTY

J. F. McGovern, M.D., Reporter

The regular meeting of the Middlesex County Medical Society was held at the Perth Amboy Hospital on January 31, 1928, at 4.15 p. m. The minutes were read and approved.

Dr. Haight spoke in praise of Dr. Reik for securing veto of the Governor in reference to the bill giving nurses the right to examine children in school.

It was regularly moved and seconded that the following resolution be endorsed by the Society:

"That it is the concensus of opinion of the members of the Middlesex County Component Medical Society that the immunization of children against diphtheria by the use of toxin-antitoxin is desirable and strongly recommended, and that it is also recommended that such immunization be under the same rules and regulations as those governing smallpox regulations. And it is further moved that a copy of this motion be put on the minutes and a copy sent to the Board of Education, and be published in the Journal of the Medical Society of New Jersey."

Dr. Haight asked for remarks on the meeting

held at Newark, N. J., which dealt with Annual Registration of Physicians. Dr. Henry, Sr., reported at length and stated that it was the consensus of the meeting that yearly registration of physicians was unnecessary.

It was regularly moved by Dr. Haight, and seconded by Dr. Klein, of Perth Amboy, that this Society go on record as opposed to yearly registration of physicians. The Secretary was instructed to write letters to Assemblymen and Senator of this county in case this bill was introduced and reached the Senate.

The resignation of Dr. Nafey as Chairman of the Program Committee was read and accepted. Dr. Johnson was appointed by the Chair in his place.

It was regularly moved and seconded that the Publicity Committee be instructed to function. The following newspapers were mentioned and adopted for the proper dissemination of news to the public: the Perth Amboy Evening News; The Home News.

New Business

The name of Dr. Carlyle Morris was presented by Dr. Dix of Metuchen, N. J., for admission to the Society. The name of Dr. John W. McKinstry was proposed by Dr. Scott of New Brunswick.

The Secretary was empowered to have all the minutes of the meetings typewritten and recorded in a loose leaf book. He was instructed to purchase said book and render bill.

Dr. Reik's letter in reference to Dr. Haight was read. Dr. Haight defended himself, saying that he had not carried on any slander campaign against Dr. Reik. He also remarked that the Committee on Health of which he is a member was apparently discontinued in the State Journal and did not appear in the last issue of the Journal.

Dr. Henry, Sr., moved and this motion was seconded by Dr. London, that the above mentioned affair be referred to Dr. Haight and that he direct a letter to Dr. Reik to settle this matter in a manner fair to both.

The paper of the afternoon was read by Dr. Walker, subject: "Treatment of Hypertension by Ureteral Catheterization and the Application of Medicaments to the Renal Pelvis".

Dr. Walker took up the etiology of these cases and stressed focal infections, teeth and tonsils. In all, he reported a total of 7 cases. In some cases he started with blood pressure of 220, and as a result of this treatment, was able to maintain them as low as 160 and in a very comfortable physical state, the limit of time not being definitely stated.

Dr. McKiernan in discussion, reviewed this part of the subject and mentioned that at the last G. U. meeting at Baltimore the "Medical Kidney" was discussed and they felt that more attention and time should be paid to it. He laid stress on the necessity of pyelograms since from them definite ideas of pathology can be obtained. He agreed with Dr. Walker that early infections of kidneys in children should be catheterized.

February Session

The regular monthly meeting of the Middlesex County Medical Society was held at the Y.M.C.A., New Brunswick, February 23, 1928, at 4 p. m. The minutes were read and approved.

Dr. Haight reported that he and Dr. Reik had reached an agreeable conclusion of their discussion by letter.

Dr. Hoffman reported that the National Tuberculosis Committee is anxious to provide a speaker for our next county meeting. Volunteer speakers were asked for to address lay meetings where the subject of Tuberculosis will be discussed.

Dr. Hoffman outlined briefly the Workmen's Compensation Law.

Paper of the afternoon by Dr. Forney, of Milltown, dealt with the "Postoperative Treatment of Perineorrhaphy". (Paper to appear later in the Journal)

Discussion

Dr. Clark said he has been accustomed to irrigate daily with boric acid solution, and never found it necessary to catheterize. Has used the dry vaginal pack, which he changed every 24 hours in his last case with good results.

Dr. Haight remarked that at the Women's Hospital in New York City, the men were afraid to irrigate the peritoneum.

Dr. Hoffman believed that the pre-operative treatment of endocervitis by local application or fulguration was of great importance. The type of operation and degree of tear naturally alters the postoperative care and result obtained.

Dr. Walker remarked that repeated catheterizations were not irritating provided some antiseptic, such as silvol, was installed into the bladder. He believes that locking of bowels postoperatively saves soiling of the perineum and leads to less infection.

Dr. Nafey said that tension on sutures was not as important as infection. Some cases get well with sloppy after-care. If a definite routine such as described will help increase the percentage of good results, he was for the adoption of such a procedure.

Dr. Gruessner thought packing the vagina daily helps to save the perineum from a lot of soiling.

Dr. Forney closed by saying that in his early cases he flushed the vagina and found poor results. The dry treatment was suggested to him by Dr. Bonney, while visiting the London Hospital. The dry care has completely eliminated all postoperative slough.

Medical Section of Rutgers Club

John H. Rowland, M.D., Secretary

The regular monthly meeting of the Medical Section of the Rutgers Club was held on Wednesday evening, March 14, 1928, at the home of Dr. N. N. Forney, 512 Main Street, Milltown, N. J.

There were present 40 members, friends and guests. There being no business to transact the speaker of the evening, Dr. Aspley P. C. Ashurst, of Philadelphia, was introduced promptly at 9:00 p. m. by the chairman, Dr. H. W. Nafey.

Dr. Ashurst presented a very instructive talk on "Fractures About the Elbow Joint". The subject was discussed freely by the members and guests to the advantage of all present.

After the scientific program was completed the gathering enjoyed pleasing refreshments and a social hour.

MONMOUTH COUNTY

F. J. Altschul, M.D., Reporter

The February meeting of the Monmouth County Medical Society was held on February 20, at the executive quarters of the Monmouth County organization for Social Service, Red Bank. Because of inclemencies of the weather, only 25 members were present. The meeting was devoted to the subject of tuberculosis. Dr. Marcus Newcomb, of Brown's Mills, spoke on the "Early Diagnosis of Tuberculosis", stressing the subjective symptoms as being of great importance even in event of negative physical findings.

A very instructive motion picture film, "The Doctor Decides", was shown, and the Early Diagnosis Campaign, sponsored by the National Tuberculosis Association, was discussed.

Dr. Newcomb also spoke on some of the Bills before the State Legislature of interest to the profession.

After a very fine buffet luncheon, prepared by the Public Health Nurses, the meeting adjourned.

MORRIS COUNTY

Marcus A. Curry, M.D., Reporter

Regular quarterly meeting of the Morris County Medical Society was held the evening of Tuesday, March 13, at the Mansion House in Dover.

President Haven presided over a rather slim attendance, at the opening, which was gradually augmented by belated arrivals through the thick mist of the evening, that made motoring a slow and risky performance, until the peak of the attendance reached 30 members; very good, all things considered.

Routine business was conducted, including proceedings of the sessions of the Executive Committee and the activities of other committees. High points of interest in the activities of the Executive Committee were the announcement of a special meeting on May 8, in Morristown, for which Dr. Louis A. Conner, attending physician New York Hospital and Professor of Medicine at Cornell, has accepted an invitation to speak on "Coronary Thrombosis and Angina Pectoris". For the regular quarterly meeting in June the program will be "Clinical Case Reports" by members of the society.

Dr. Emory, of the Publicity Committee, made a report which indicated a good deal of work accomplished; that they organized on February 3, have interviewed the editors of the newspapers throughout the county in regard to publishing the weekly radio health talks every Friday from Atlantic City; that so far 7 editors have agreed to publish these weekly talks, either in whole or in part; that the committee had sent out a circular, in cooperation with the Antituberculosis Society, sending a pamphlet to each member and attending to the distribution of about 4000 pamphlets to the public; announcing that the local Antituberculosis Association have planned for a lecture with motion pictures, by Dr. Jacobs, the meeting to be held in Morristown, March 23, at 3:30 p. m., at the Women's Community Club; that they also are planning for a meeting in Dover; that they have an article on tuberculosis which they expect to have in the papers the latter part of this week.

Election was held of 3 members to constitute a Nominating Committee, to recommend officers for next year; the selections of the committee to be reported at the June meeting and to be voted

on at the annual meeting in September. To this committee were unanimously elected, Drs. Curry, Flagge and Krause.

Secretary Lathrope reported that, as directed at the special meeting in March, he had written to the United States Senators from New Jersey in the matter of the amendment to the Tax Reduction Law, introduced by Senator Robinson of Indiana, exempting expenses of physicians in attending medical meetings; the answers received being favorable.

The motion "tabled" at the special meeting in March, "That the Morris County Medical Society go on record as favoring annual registration", was taken up and had considerable discussion during which President Haven and Secretary Lathrope answered many questions; explaining that the Welfare Committee is almost unanimously in favor of it; that practically everybody admits that in principle it is bad in that the medical profession is paying for prosecutions that the public ought to pay for but never has and never will; that if we want illegal practitioners prosecuted we shall have to do it; that in New York where they have annual registration they drove out 1000 illegal practitioners last year; that the New Jersey State Board of Medical Examiners know now of nearly 1000 illegal practitioners, and annual registration will give them a rather good check on who is practicing medicine in the state legally and who is not; that this measure will provide funds to prosecute this work. They also explained away some misgivings about a legal practitioner possibly losing his license if he does not register. The entire situation having been gone over with much pains and thoroughness, the motion to approve was put and unanimously carried.

The scientific side of the program was then taken up, being a Symposium on Pediatrics, taken part in as follows: (1) "Problems of Management in the Malnutritional Diseases of Early Childhood", Dr. Krauss; (2) "Tuberculosis in Infancy and Childhood", with special reference to difference in type between childhood and adult life and elucidated by interesting x-ray pictures, Dr. Bartlett; (3) "Protein Susceptibility in Infancy and Childhood", Dr. Sherman; (4) "After-effects of Infectious Diseases on the Child's Health", Dr. McElroy.

The quartette of papers composing this symposium indicated careful and painstaking preparation; lending added proof, if need be, of the abilities of the members to furnish a program capable of inducing wrapt attention and keen interest, and reflecting credit to the members and to the society. (The papers have been promised for publication in the Journal.)

Supper was served and enjoyed.

The June meeting will be held at the Dover General Hospital, invitation having been tendered by the management and accepted by the society.

PASSAIC COUNTY

John H. Carlisle, M.D., Reporter

The regular meeting of the Passaic County Medical Society was held March 8, at the Paterston Health Center, Dr. Tuers presiding. There were 65 present. The minutes of the last meeting were read and approved. The Board of Censors reported favorably on Drs. Polizzetti and Linares, who were elected to membership, as was Dr. Potter, by transfer from Philadelphia County.

Dr. Lathrope, of Newark, spoke on "Indigestion a Symptom". He analyzed a series of 1000 cases in 224 of which indigestion was a major complaint. Only 3 of these were finally classified as psychoneurosis. Indigestion was considered by the speaker as a symptom, first of gastro-intestinal and hepatic disorders, and second, of extra-alimentary tract disease. In the latter group it is of extreme importance to make careful examination before classifying digestive disturbances as functional. Dr. Lathrope believes that indigestion is the cause of nervousness more often than nervousness is the cause of indigestion.

An interesting discussion followed in which Drs. Murn, L. Shapiro, O. Hagen, Ryan, Todd, and Lathrope took part.

Dr. Tuers then introduced Dr. Walt P. Conaway, President of the State Society, who was accompanied by Dr. Morrison, the Recording Secretary. Dr. Conaway spoke of the work of the State Society and mentioned a number of its aims and accomplishments.

It was moved that the chair appoint a committee to nominate a successor to Dr. Scribner as Permanent Delegate to the State Society.

The following resolutions on the death of Dr. Fortunato Vigna were then read:

Whereas, It has pleased God in His infinite wisdom to remove from our midst our friend and colleague, Dr. Fortunato Vigna, and,

Whereas, His loss will be deeply felt by his family, colleagues, and a wide circle of friends,

Therefore, Be it Resolved, That the Passaic County Medical Society expresses its deepest sorrow in the loss of Dr. Vigna and extends the sympathy of its members to his family and friends, and be it also

Resolved, That a copy of these resolutions be spread in full on the minutes of the Passaic County Medical Society and a copy be sent to the family.

As part of the March campaign for the early diagnosis of tuberculosis a two-reel film, "The Doctor Decides", was then shown by the Anti-tuberculosis League.

The meeting adjourned at midnight.

UNION COUNTY.

Summit Medical Society

Wm. J. Lamson, M.D., Secretary

The regular monthly meeting of the Summit Medical Society was held at Wallace Pines on Tuesday, February 28, 1928, at 8:30 p. m.. Dr. Meeker entertaining and President Morris in the chair. Those present were: Drs. Bensley, Bowles, Burritt, Clark, Dengler, Disbrow, Eason, Johnston, Krauss, Lamson, Larrabee, Meeker, Meigh, Milligan, Moister, Morris, Pollard, Prout, Smalley, Tator, Tidaback, Wolfe and MacPherson; and, as guests, Drs. Meeker and McCauley of Newark. The minutes were read and approved.

A communication was received from the Union County Tuberculosis League, asking the endorsement of this society of its "Early Diagnosis Campaign". This was unanimously approved, and the resolution was signed by the members present.

A communication was also received from the Coöperative Service Association of Summit, requesting the opinion of the society as to the need of a Community Nurse. That there is such a

need was unanimously expressed by a rising vote, and the president appointed a committee consisting of Drs. Milligan, Eason and Meeker to confer with the Association as to the details of such nursing service.

Dr. H. J. F. Wallhauser, of Newark, then addressed the society on the subject, "Shall We Continue the Use of the Term 'Eczema'?" He referred to the multitudinous and confusing nomenclature used in dermatology, 75% of which have been appropriated by the various forms of so-called 'eczema'. He proposed to class them as dermatitis recurrens. Of course a simple dermatitis is due to a local cause, and is generally easily cured. But the recurrent type is due to one of several factors: (1) a predisposition to such lesions; (2) an allergic reaction, many cases being associated with a hyperacidity in the urine, or a kidney dysfunction (he has seen few skin conditions due to a pure protein allergy); or (3) cases in which local causes are more or less continually present, which are really dermatitis seborrhoica. Such for example are most of the cases of infantile eczema, which is due largely to seborrhea of the scalp, etc. Grouping these types of skin conditions in this way, and basing the diagnosis on the underlying cause, which should always be carefully sought, rather than on the appearance of the lesion, simplifies the understanding of these cases, and is a great help in treatment.

Dr. Wallhauser showed some pictures illustrating the different types of recurring dermatitis of which he had spoken, and explained their treatment.

March Meeting

The regular monthly meeting of the Summit Medical Society was held at Wallace Pines on Tuesday, March 27, at 8:30 p. m., Dr. Hallock entertaining, and the President, Dr. Morris, in the chair. Present: Drs. Burritt, Byington, Campbell, Disbrow, Eason Hallock, Johnston, Krauss, Lamson, MacPherson, Meeker, Meigh, Milligan, Moister, Morris, Smalley, Tator, Tidaback and Wolfe.

The "Committee on Community Nurse" reported that they had a conference with the Co-operative Service Association, and that a nurse would soon be engaged.

Dr. Walter G. Crump, of New York, read a paper on "Acute Generalizing Peritonitis". He called attention to the very large surface area of the peritoneum, (47,000 sq. in.) which is larger than that of the body skin. Infections are generally direct, either through perforation of the gastro-intestinal tract or arising from the female genital tract, rather than via the blood-stream. The appendix accounts for 80% of such cases. Gonococcus infection remains on the surface of the peritoneum, and frequently "cultures itself out", becoming less virulent, so that operation can be delayed until localization occurs. Colon bacillus infection is not virulent, like the streptococcus, as the peritoneum has developed a certain amount of immunity to it. Pneumococcus infection, complicating pneumonia, occurs through the blood-stream, and is very virulent.

In treatment, much can be done by preventive measures, and it should be the surgeon's aim at the start to localize the infection, as far as possible, by physical and physiologic rest, posture, no food, no enemas, no catharsis, etc.

Announcements

GROUP HEALTH AND ACCIDENT INSURANCE, AND GROUP AUTOMOBILE INSURANCE

The insurance offered to members of the State Society the past year has evidently been received with favor by them.

The Health and Accident Policy has brought relief to a number of members who have had claims, and their satisfaction with the prompt and liberal settlements is shown in their approval to the committee and commendation of the insurance to others, in some cases becoming helpful solicitors among their friends. This is a valuable help to each other, as the larger the group taking the insurance the stronger is the position of the committee with the company in negotiating prospective benefits.

The renewal of the policy for another year is now assured and we may again broadcast the information on the extraordinarily low premium combined with exceptional coverage for a wide range of possible contingencies in illness and accident—just the needs of doctors which the committee has kept steadily in mind to get covered. The abrogation of a 75% quota of applicants was an achievement which allows any applicant to immediately get his policy. Full description of this policy may be found in the Journal, April, 1927, (page 254). The one policy covers all accidents, general and travel, with both total and partial disability. The Premium is \$60., \$70. or \$85., with no age limit.

The "Automobile" policies described in the Journal, November, 1927, (page 649), are being taken by our members in rapidly increasing numbers, as evidently the best and at extraordinarily low premiums. The one on "Fire, Theft, Transportation and Collision" is for a definite value, fixed according to your car and its age, at a premium 20% off the standard table.

The one on "Personal Liability and Property Damage" is for any amount you choose, at a premium 15% off the standard table, plus a dividend of 15% more at end of the year.

For the Committee,
Frank W. Pinneo, Chairman.

ANNUAL GRADUATE FORTNIGHT OF NEW YORK ACADEMY OF MEDICINE

The New York Academy of Medicine is making arrangements for a series of lectures at the Academy, coördinated clinics, clinical demonstrations and courses in hospitals and teaching institutions of New York, on the subject of "The Problem of Aging and of Old Age".

This, the first "Annual Graduate Fortnight" which the Academy is arranging for the benefit of general practitioners and specialists, will take place the first two weeks of October, beginning October 1, 1928.

A number of outstanding authorities will be invited to take part in the Annual Fortnight, and particular emphasis will be placed upon lectures and courses on the early recognition and prevention of disturbances, commonly ascribed to

aging, but very often not the result of aging but its cause. Courses on functional tests of organs and systems of function such as circulation, digestion, metabolism, endocrine functions, immunity, etc., are to be offered and the relation of unrecognized forms of intoxication, chemical as well as bacteriologic, to the dangers of middle age are to be specially emphasized.

CLINICAL TOUR AMERICAN COLLEGE OF PHYSICAL THERAPY

Travel is the only logical antidote for confining work. Realizing this, the American College of Physical Therapy established contracts with European specialists with a view to learning the sentiment abroad in regard to such a movement of doctors from the United States. The response was beyond their expectations. Their foreign colleagues actually entered into competition with one another in order to offer their visitors an interesting time.

The party will sail from New York May 26. The first clinics will be visited in London. The English program includes St. Bartholmew's Hospital, reception at the Middlesex Hospital and a clinical meeting at London General Hospital, with a final meeting at the Lord Trelor Hospital.

At Paris, Salpêtrière Hospital, American Hospital, Prof. D'Arsonval's clinics, Dr. Rivière's clinic will be visited. While there the doctors will be guests of the Society of Electrotherapy and Radiology of France.

In Switzerland, Prof. Rollière's clinic at Leycin, the first heliotherapy clinic ever established; and a clinical meeting at Zurich University.

In Austria, Dr. Kowarchik's clinic at Vienna, clinics at Allgemeine Hospital, clinical meeting at Kaiser Jubiläum Spital. Additional clinics will be arranged in Vienna to suit the desires of the visiting members.

In Germany clinical visit at Dr. Rudolph Virchow's Hospital, Berlin, and a meeting and clinical discussion with Dr. Nagleschmidt presiding.

In Denmark, where the clinical visit will end, meetings have been arranged at the Finsen Institute in Copenhagen and a clinical meeting in the laboratory of Dr. Carl Sonne.

It is interesting to note preliminary lectures have been arranged to be given on board ship en route to Europe. This will enable the doctors who go abroad to obtain a clear conception of what is in store for them on the other side.

Any doctor who is interested in physical therapy is cordially invited by the College to attend these clinics. Headquarters for this tour have been established at 25 Broadway, Suite 656, New York City, New York. Further particulars may be obtained by writing to that address.

AMERICAN MEDICAL EDITORS' ASSOCIATION PRESENT ACTIVITIES AND PAST HISTORY

With the death of the last President, Dr. Henry O. Macy, the American Medical Editors' Association founded in 1869, became inactive and remained so for 5 years. At the time of Dr. Macy's death, 117 editors were on the roster.

Early in January, 1928, the present President, Dr. H. Lyons Hunt, called a meeting of a few of the New York editors to discuss the advisability

of reviving the Association. The vote of those present was unanimous that this should be done.

That a need was felt for the Organization, can best be demonstrated by the fact that not only practically all members of the old Association came in, but over 100 new members made application, so that today the American Medical Editors' Association is stronger and more powerful than it has been in its entire history.

As the organization swung into power, numerous meetings were held, officers elected and committees appointed to study and promulgate a tentative platform representative of the American Medical Editors' Association. Just how the entire Association will stand on these subjects, will largely depend on the information gleaned on each by the committees appointed.

That the Association is functioning with enormous activity, is shown by the fact that committees have been appointed to study and advocate a stand for the Association on the following subjects: "MEDICAL JOURNAL ENDOWMENT FUND." (This is a rather new idea but there seems no reason why medical schools and hospitals should receive endowments while medical journals and those who run them, often at considerable personal sacrifice, should not look to share in the central endowment fund. Certainly the medical journals constitute one of the greatest forms of medical instruction and teaching in the country and through the profession are of untold value to the health of the nation.)

Committees have been formed to study ways and means of "Standardizing Medical Education" and "Standardizing Medical Licensing Examinations." "Bringing About International Medical Reciprocity." (Four Committees, one in Canada, one in the States, one in England and one in France have already been appointed to study this subject.)

Committees to study "Workmen's Compensation," "Pay Clinics," "Commercial Laboratories," "Open Hospitals," "Medical Compensation," "Drug Store Prescribing," "Pharmacy and Therapeutic Products," "Electrotherapeutic Apparatus," "Prohibition."

Committees on "Legislation," "Advertising," "Publicity," "Policy," "Public Health," "Medical Economics," and so on, all studying certain questions and working out solutions for the problems involved, for the advancement and elevation of the medical profession and of medical journalism.

The officers of the American Medical Editors' Association are working with might and main for the benefit of its members and deserve their full support through the Journals they edit in advocating the policies the Association stands for.

THE POSSIBILITIES OF MEDICAL MOVIES

(Part of an address delivered before the Conference of the National Board of Review, January 26, 1928.)

J. F. MONTAGUE, M.D., F.A.C.S.,

University & Bellevue Hospital Medical College Clinic.

New York City

Aside from the very obvious possible applications of moving pictures to the problem of teaching medical students the film carries with it tremendous possibilities as a medium through

which public health instruction may be quickly, persistently and most effectively distributed. It, thus, has an incalculable value in instructing communities in the art of self care during epidemics of contagious diseases. Moreover in matters of less urgent nature films of public health have been found to be an enormous aid in carrying on to success the various hygienic campaigns which have within the last few years been launched in an effort to check the spread of tuberculosis, to aid the early recognition of cancer and to eradicate diseases such as hookworm. An immense amount of suffering has been saved and economic value preserved by the various sight conservation and safety campaigns which public spirited organizations have carried on. Motion picture films on medical subjects have already played an important part in the matter of public health instruction and I am sure will play an increasingly greater part as the efficiency of the method and its comparative costlessness becomes more generally recognized.

Of more material interest to the medical profession are the possible uses the motion picture film may have as an aid to diagnosis. Motion pictures of diseased conditions do of course afford an opportunity for prolonged examination of the part without any undue strain or fatigue on the part of the patient. Moreover pictures of this kind constitute a series of records which when taken over a period of time may serve as an accurate basis of comparison as to the effects of treatment or as to the progress of the disease. This is especially valuable in the instance of cinema records of conditions existing in the interior of the intestines and other organs since these are not readily accessible to view and prolonged study.

Perhaps that advantage of medical movies which appears most spectacular to people outside the profession is the one which permits the utilization of motion pictures to record animal experimentation. That this is a truly wonderful development and one which may rightfully be considered the answer to an antivivisector's prayer will be readily apparent upon considering the following facts: Heretofore each medical student experimented upon numerous laboratory animals such as dogs, cats, turtles, etc., in an attempt to learn by direct observation the truth of certain physiologic facts. Depending upon the student's intelligence, or lack of it, the amount he learned from the experimentation varied from little to perhaps a little more. In the hands of a skilled technician the experiment may be made 100% effective. This is by reason of the fact that the trained physiologist does the experiment in an expert manner and its recording upon film makes it repeatedly available at many times and in many places without the repetition of the experiment at the cost of other animal lives. If the antivivisectors were to use their funds and energies along the lines of advocating and aiding the production of medical movies their humane endeavors would be more speedily accomplished and I am frank to say I think more physiology would be actually learned.

Have a Heart

Motorist—"I say, will five shillings pay for this wretched hen which I've run over?"

Breeder—"You'd better make it ten shillings. I have a rooster that thought a lot of that hen, and the shock might kill him, too."

—London Passing Show.

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DIATHERMY

NORMAN EDWIN TITUS, M.D.,
New York City

Diathermy is perhaps the best known procedure in electrotherapy today, not alone because physicians are interested in this somewhat new tool in their box but also because patients have great faith in a remedy that is administered by the physician himself or his assistant in the office, and which brings about an immediate result that can be perceived by the patient. Years ago, when a patient went to his doctor and received a prescription to take to the drug store for medicine, the clever but useful method of making out these prescriptions in Latin kept the patient in ignorant awe of the profound knowledge of his doctor. Today, the patient is of a better mental understanding, wants to know what goes on, and is impressed when a doctor gives him some physical remedy, such as diathermy, which can be felt being administered and in which administration he takes an active part. But, aside from the psychic involvement of this procedure, the patient feels, in the result obtained, that the modality does him good. This is because medical men of recent years have come to appreciate that, through encouraging and increasing the effectiveness of natural reactions to pathology, the recovery of the patient is hastened.

To many men practicing medicine the subject of electrotherapeutics is very awesome. They think it is necessary to know a lot of

physics and to be practically an electric engineer in order to administer electricity to their patients. This, however, it not the case. As an example, salesmen of today are so educated by the manufacturers that they can convince almost anyone of the efficiency of the machine they sell, and these arguments are so strong that many men buy machines and attempt to work them with only instruction from the salesmen. Luckily for the patient, high frequency electricity administered in the form of diathermy is not as dangerous as may seem and the doctor who knows no more than the salesman tells him frequently gets results which are gratifying to him and his patient, although his knowledge of electricity is less than meager.

Before discussing the effects of high frequency current as used in diathermy, it is only proper to give a brief description of the apparatus and how this current is formed. First of all, it is necessary to have an alternating current. This is because the mechanical basis of the apparatus is a transformer which will not work on direct current. This alternating current is fed to the apparatus and first goes through a series of choke coils. The coils do exactly as the name implies, "choke" down the voltage, allowing only what is desired to go into the step-up transformers. It is a well known rule of electricity that reduction of either voltage or amperage causes an increase in the other. The choke coils in holding down the amount of voltage, or pressure of the current going into the transformers, increase the volume or amperage of the current received. By means of the phenomenon of

induction this 110 volt alternating current may be raised to any desired voltage; some of the small portable machines are not capable of raising this voltage above 300 or 400, while others of a much larger type will raise the voltage from 110 to 95,000. The current issuing from the secondary terminals of this step-up transformer then goes by means of 2 wires into 1 or 2 condensers. Most people know what a condenser is but if asked to describe it electrically, they are at a loss to give an adequate description. I will, therefore, digress a minute to explain in a more understandable way. Electricity flowing through a system of wires is comparable to water flowing through a system of pipes, and the voltage represents the pressure, the amperage the volume. Condensers in any circuit correspond to tanks wherein the water flows until it reaches a certain volume, when it will spill over. In like manner electricity flows into the condenser and when it builds up enough pressure to break down the resistance, the tanks are emptied in the same way that the water would be siphoned out.

In the high frequency machine, the current coming from the step-up transformers flows into the condenser and when it reaches sufficient pressure or voltage, it jumps across the air resistance of the spark gap, and the condensers are discharged. To carry out the simile, the water is immediately siphoned from the tanks, because in jumping the spark gap, which is a shunt gap, the current is short-circuited.

In most high frequency machines of decent capacity, the condensers are Leyden jars and it is a well-known fact that when the inner coating of a Leyden jar is charged, there is another current induced on the outer coat. In a high frequency machine the outer coats of the Leyden jars are always connected by a helical solenoid. This, being turns of wire either forming a cylindrical or pancake form, such as the concentric strands of a spiderweb, is in itself a step-up transformer of a ratio of 2 to 1. Wires lead from this solenoid to binding posts of the machine from which the d'Arsonval current is obtained.

When the condensers, charged from the

step-up transformer, have acquired sufficient voltage to break down the air resistance of the spark gap and so are discharged, another current is induced on the outer side of the condensers, or Leyden jars, which current races through the d'Arsonval solenoid and generates the one we know as the high frequency current. If another solenoid is connected to either end of the d'Arsonval, adding many more windings or turns to the original one, the capacity of this step-up transformer is so increased that a current of extremely high voltage is formed. From the end of this solenoid it is therefore possible to obtain a spark or current known as the Oudin current. Many of you have heard from salesmen of the Tesla high frequency current. The only difference between this and the one described is that the Tesla is formed by placing another solenoid inside or outside of the d'Arsonval solenoid, thus raising the voltage slightly and forming another bipolar circuit which has not as high a voltage as the Oudin or as high amperage as the d'Arsonval.

Before leaving the construction of the machine, it might be well to explain the reason why the Oudin current is capable of jumping some distance and making a spark to a patient, as in the application of the non-vacuum electrode or a needle point. With such high voltage this current is able to do what electricity always tries to do and that is, if a capacity empty of electricity is brought near, the current always will attempt to fill the capacity and, of course, the patient to whom it is administered is such a capacity empty of electricity.

In 1896, d'Arsonval, Professor of Medicine in the College of France, discovered that if a current oscillates from negative to positive at a rate greater than 5000 times per second, no nervous nor muscular response can be obtained. Realizing that any resistance placed in an electric circuit would slow up the passage of a current and thereby cause the creation of heat, he named this procedure "Thermopenetration". In 1906, Nagelschmidt renamed it "diathermy", from the Greek words "dia" and "thermano" meaning to heat through and that is exactly what we use the high frequency cur-

rent of d'Arsonval for today. We use it to cause heat to be formed throughout the path between the electrodes placed upon the patient's body. This procedure really amounts to a trick that we play on the human organism. In forming heat we cause the body to make an attempt to dissipate this extra heat and so it responds by a vasodilatation calling upon a greater amount of blood to pass through the part so treated. This vasodilatation brings about a physiologic hyperemia.

However, in causing this heat to be formed, we are not able to make the path an even one between electrodes because of the natural thermoconductivity of tissues, and the heat generated in the interelectrode area is dissipated into the tissues through this normal protective mechanism of the body. Consequently, only the middle of the interelectrode area receives the maximum amount of heat generated. If 2 circular electrodes of the same size are used, the area so affected by the heat would be like an hourglass the point of maximum intensity being the neck of the hourglass. As treatment continues, this neck of the hourglass expands and it is calculated that after 15 or 20 minutes, the shape of the area affected assumes the form of a barrel, larger in the center than at the ends.

When we desire the point of maximum intensity to be nearer one surface than the other, we use a smaller electrode on the surface near which we desire the maximum effect. This is because we concentrate our current on a smaller surface and the density of the current has the greatest effect near the smaller electrode instead of near the other one where the density is less. If we use one large electrode and the other one is a needle point, it is easy to understand how the effects will be immediately at the point of the needle because there will be the greatest current density.

It is not extremely difficult to understand the fundamental principles of diathermy and if they are understood, the applications of this modality are gratifying when prescribed and directed by a modernly trained physician. We have a modality capable of transforming electric energy into heat in any path that is placed between 2 electrodes and, where it is felt

that this heating up will be of benefit in treating the pathology presented there is an indication for the use of diathermy.

A great surgeon has said, "Pain is the last prayer of the nerve for a little more blood". With diathermy we have a means of forcing the body to provide more blood for a part that is painful, and the greatest indication for diathermy is as a sedative for deep-seated pains. When passing an electric current through a deep-seated infection, however, a great risk is being run of breaking down the surrounding barriers the body has established and we may thus cause the infection to spread throughout the tissues. Such a condition is practically the only contraindication for diathermy. If the infection is subacute and the battle between it and the resistance of the body is about even for a long period of time, a very slight amount of diathermy frequently will buck up the resistance and the infection can be overcome. One must always realize that this current is oscillating back and forth at great speed. In fact, machines today are capable of causing a frequency of as great as 3,000,000 per second and the oscillation within the tissues is a factor that must be reckoned with in treating infections.

So much for the constructive and theoretic side of diathermy. Let us now consider diathermy as applied to different sections of the body. In cases of cerebral hemorrhage, where we wish to hasten the reparative processes of the body, diathermy is indicated as a measure to bring more blood to the brain. It is perfectly safe to pass as much as 1000 milliamperes through the brain, provided that increasing and decreasing the current is carefully watched.

Some time ago, discussing encephalitis lethargica with a neurologist, he told me that it was the accepted procedure to feed the patient pituitrin in order to increase the circulation through the brain. I asked him why diathermy was not indicated when it was known that heat could be generated to stimulate the circulation or even to such an extent as to coagulate the brain, as has been done by Nagelschmidt. He said the only reason why

cases in his hospital were not treated with diathermy was because none of the neurologic authorities mentioned it in their books. I merely cite this incident to show you that until such so-called authorities really become authoritative in all kinds of treatments in their specialty, it will be difficult to convince stumbling young specialists that something that is not in the books is worth while.

In the treatment of cerebral hemorrhage, as in the treatment of most conditions by physical therapy, it is not sufficient to use diathermy alone.

In cases of sinusitis, provided that drainage is established, diathermy is extremely useful. It is easy to understand that if we create heat within the congested cavity and there is no drainage the heat will cause an expansion of the contents of the cavity and increase the amount of pain. Therefore, as in all nose and throat procedures, it is necessary to establish drainage and then, by forming a physiologic hyperemia, we can increase the amount of local resistance to infection.

High frequency currents have been used in the treatment of tonsils but I shall defer discussion of this subject until we take up the purely surgical application of these currents. Many cases of laryngitis are given definite relief by the application of diathermy through the larynx. As yet, no one who understands thyroid conditions has reported results either good or bad, with diathermy through the thyroid gland. From a physiologic viewpoint, it is possible that hypothyroidism might be benefited by this means of stimulating the circulation of a gland.

In diseases of the chest, diathermy is of more than distinct advantage. Those of you who have listened to the song of the salesman and have bought a machine should never neglect an opportunity to use diathermy in pulmonary conditions. Practically every condition of the lungs, except tuberculosis, where we might only increase the tendency to hemorrhage, will react favorably to diathermy. Bronchitis, either acute or chronic, is greatly helped and statistics of 1000 cases of pneumonia of all types treated with this modality, show an average mortality of 14%. Compare

this with the average mortality of 40% treated without diathermy. No matter what anyone believes is the correct treatment for pneumonia, diathermy does not work against it and, as stated before, it is an added tool in the armamentarium of a modern physician. Many seemingly miraculous cases of pneumonia cure can be cited to show the usefulness of diathermy, but such a subject as the use of this modality in pneumonia should be taken up in a separate paper.

In the west, more than in the East, where we are restrained by conservatism passed on to us in the medical schools, diathermy is used a great deal in the treatment of flabby heart muscles and angina pectoris. For my own part, I am very dubious about the possible ill effect that may show up later in a heart treated with diathermy. But, from reports of cases treated, it seems that diathermy does have some beneficial effect in cardiac cases, and I will admit that in a few cases of angina pectoris and myocarditis which I have treated the results have been most gratifying. Of course, I have heard of thousands of cases that would make one believe diathermy is almost a specific, but I do not care to pass on to you any hearsay evidence in the treatment of such conditions as these.

Below the chest, diathermy has another field of usefulness. Crile, in the Cleveland Clinic, endorses the work of Portman, who has for the past 3 years been administering diathermy to the liver during operations where the abdominal contents had to be exposed. The reports show that these cases do not suffer from surgical shock; the reason ascribed is that heating the blood in the liver before allowing it to pass out to the rest of the system, helps the patient to stand the operation in such way that shock does not occur. In untreated cases that develop shock after the operation, a similar procedure has brought about phenomenal results, according to Portman. In subacute gall-bladder conditions diathermy is of distinct help; in cases of interval appendices it is very easy to decide whether or not the patient is ready for operation, inasmuch as an appendix not seriously involved will stop causing trouble, whereas with

severe appendicitis diathermy will increase the pain to such an extent that no time should be lost in getting the patient to the operating room. Some men attempt to treat gastric ulcers with diathermy but in this way only ask the body to send more blood to the part; personally, I think this is only hastening the patient to hemorrhage and that such a procedure should not be used.

In the pelvis, diathermy frequently is of great assistance. Subacute or chronic infections of the bladder, prostate or fallopian tubes are distinctly helped by diathermy. In speaking of chronic infections in the pelvis, time will not permit me to go into the treatment of chronic gonorrhoea in the female, but it is sufficient to state that Cumberbatch has been working on this problem for over 12 years in St. Bartholomew's Hospital, in London, and he states that gonorrhoeal infections not involving the tubes never need more than 3 treatments to secure entire eradication. In gonorrhoeal infections of the tubes, diathermy has produced some gratifying results. Cherry, of New York, leads in this work and reports all show that the procedure is efficient. The application of diathermy with 1 electrode in the fornix and 1 on the abdomen frequently will bring about the most pleasing results. Of course, it is extremely difficult in this situation to obtain a complete eradication of the gonococci. It is worth mentioning that the treatment of gonorrhoea in the male, with diathermy, is so far unsuccessful. Before leaving the abdomen in general, it is worth drawing attention to the work of Kollischer, of Chicago, who reports good results in the treatment of most forms of nephritis by applying diathermy to the kidneys. Pelvic exudates also respond to diathermy, and many conditions of the broad ligament that embarrass the gynecologist in his attempts to relieve the pain can be helped by this modality.

Regarding the extremities, the pain from all kinds of trauma can be made less by the application of diathermy. Myositis, sprains and strains, are all helped through reaction of the physiologic hyperemia induced.

Some conditions that occur in bones and joints are amenable to diathermy but if the case

exhibits an arthritis with exostoses, it is foolish to expect that diathermy will do more than alleviate the pain. The treatment of bursitis, even in the subdeltoid region, has been revolutionized since diathermy has been used. Acute subdeltoid bursitis responds immediately to diathermy, and in cases that show calcification, we can now be sure to remove all calcium deposits when diathermy and static electricity are used.

As we have come to the extremities we might just as well start with the use of surgical high frequency, or as the English call it, "surgical diathermy", by speaking of one of the most gratifying results that can be obtained with the Oudin current—which strictly speaking is not diathermy—when applied to warts on the soles of the feet. I have been told that every surgeon cuts out 1 wart on the sole of a foot and thereafter passes the buck when those cases come to his office and "chooses not to operate". It is not difficult to treat these conditions. The coöperation of a chiropodist who knows how to really remove all of the callus without causing hemorrhage is extremely helpful and then merely spraying on ethyl chloride as an anesthetic enables one to destroy the blood-vessels underlying without much if any pain, and, due to the effects of electrodesiccation, a scarless area results which rids the patient of discomfort.

You will note that I said the Oudin current is not really diathermy. The ability of this current to charge a capacity allows it to complete a circuit and be conducted to the part to which we are applying it, as in such cases with an ordinary sewing needle. The use of the Oudin current in such a way was named by Clark, of Philadelphia, "electrodesiccation"; due to the high voltage and low amperage of this current it was found on microscopic examination that the tissue is merely desiccated and resembles mummy tissue. Doyen was the first to work with the d'Arsonval or bipolar current and he named that procedure "electrocoagulation" because the tissues so treated were coagulated and the cell entities were completely destroyed, due to the high amperage of this bipolar current. Except where

extensive destruction of the tissue is desired, the Oudin current is sufficient to use and it is the method of choice in destroying warts, moles and superficial growths, even such as epithelioma above the mouth.

The Oudin current has been used by many men in treating tonsils and hemorrhoids but unbiased estimation of the results of these procedures forces the conclusion that they are not the method of choice. This current is also used to destroy growths within the bladder, where it is a method of choice.

Electrocoagulation finds its most extensive use in the destruction of large malignancies, especially in the mouth. It must not, however, be confused with the newly popularized radio knife because the high frequency current used in this procedure is of a vastly different nature than the one we use in diathermy, and I will not at present go into a discussion of this undampened high frequency current.

SUMMARY

(1) Diathermy is an electric current oscillating at a frequency of from one to three million times per second.

(2) Diathermy is administered by means of electrodes placed on opposite sides of the part to be treated. Incidentally, care should be taken that the edges of the electrodes are no nearer each other than are the centers, because electricity will always take the shortest path and if it can go from edge to edge, it will do so without going through the interposing tissues.

(3) Diathermy causes a definite heating of the interelectrode tissues, varying with their resistance. Consequently, bone will heat to a greater degree than will muscle. This fact should be kept in mind.

(4) Diathermy is indicated wherever induction of a physiologic hyperemia will bring about a reaction that may be expected to increase the resistance or enhance the physiologic function of a part.

(5) Diathermy is in no sense a cure-all; it will not stand on its own feet as a single treatment for any condition, and it gets its best results when applied with medical common sense.

PHYSICAL THERAPEUTICS

Some General Remarks Concerning Their Value and Application

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Since the World War there has come before the medical profession a form of therapy little known in a general way prior to that time, but which has since gained by rapid strides a position well toward the front ranks of therapy. This fact has been a surprise even to many of its most ardent advocates. This momentum is largely the result of the many reconstruction clinics and war hospitals, wherein these measures were so largely used, not only in this country but also abroad. This is now a part of history with which most of you are conversant and will therefore receive no further mention here.

Another part of the history of physical measures, as represented by electrotherapy, is not so well known, so a brief statement here will not be out of place. Over 35 years ago a small band of earnest and scientifically inclined physicians, men and women, formed a medical society for research into the mysteries of the electric currents as applied to the human ills and needs. This small society grew very slowly for a number of years since there were only a mere handful who took an interest in this line of work, but there were those of prominence in various localities who were interested, and with such leaders, whose names now are honored, the society gradually extended its borders to a national and finally to an international society or association, and is now the oldest of its kind in the world.

It was during the early days of this association that the members were often confounded with others practicing along electric lines but who were not physicians. These quacks brought distrust upon the legitimate profession and created such a prejudice that to practice electrotherapy during those days meant opprobrium and almost dishonor. In fact, some members were ousted from medical societies as quacks. It was under such a cloud that

these pioneers worked, but having full faith in their work and in the future of it, they kept right on, and now we recognize that they had something far in advance of their time. Those of us who are what might be called semi-pioneers, not actual pioneers, have had some of this to bear with in our own communities and can vouch for this prejudice which, happily, is now almost a thing of the past.

With this preface, now let us take up in a general way, some of the currents and their physics and physiologic actions, in order that there may be a better understanding of their real usefulness. In a necessarily short paper, it will be sufficient to stress only representative types rather than all the currents, and these in a brief way.

There are 3 main kinds of electric currents for medical use, or perhaps better stated 3 major types of effects as represented by the various currents: electrolytic, mechanic and thermic. Practically all currents have one or all of these effects, but some have one main activity with the others subordinated. For this reason we will select one representative of each effect and give a brief résumé of it.

That of electrolysis is best represented by the continuous or what is generally known as the galvanic current. This is one of the oldest known currents for therapeutic purposes and in many communities is the only current used to any great extent. Its actual value therapeutically is not as well known as it should be by those practicing electrotherapeutics, as some of the more recent discoveries along other lines seem to eclipse it.

The true galvanic is a continuous and unidirectional current as generated by either dry or wet cells, but the current we now generally use is that from the main, which is a commercial type. Where there is a direct current used commercially it is easy to have it for therapeutic purposes, for it is a constant and unidirectional current, but is not actually continuous as is that from cells. It also has the disadvantage of being subject to possible breaks in use by some fault at the power plant and this might be more or less serious under certain conditions. In those commu-

ities where there is only the alternating current, a rectifier or rotary converter is necessary to change it to the direct form.

One needs only to be conversant with both the physics of the current and its physiologic action to be able to find its therapeutic possibilities. This current is bipolar and each pole has a distinct character, so its therapy will be suggested by the polar actions. For instance, the positive gives an acid reaction while the negative is alkaline. The positive is a vasoconstrictor, sedative and pain relieving; while the negative is a vasodilator, is irritating and stimulating. One can thus see that the negative should not be applied to a painful area nor to a part where bleeding would be contraindicated. Aside from these local effects we find that there are deeper ones or what are called the interpolar effects, those which develop in the tissues which the current traverses between the electrodes. While heat is the one physical effect of the current passage, it is not the only one, for we find metabolism greatly enhanced by it as shown by an increased functional activity, and there is more of atrophic action from the galvanic than there is from the passage of the high frequency current through the tissues. This current, therefore, is conceded to be particularly adapted to treatment of chronic conditions.

When applying the galvanic current for the deeper effects we must not lose sight of the local polar actions; these effects must be taken into consideration, otherwise, the object sought might be defeated. This is a direct evidence of the necessity of a knowledge of the physics and physiologic actions of the currents.

The static currents best represent the mechanical side of electric action. While the static machine is far from being of recent origin, it being actually one of the oldest known, we find that the currents produced by its action are the least known to the general profession. This may be due largely to the ungainliness of the machine, its size being too large for the average office; and, in addition, it requires more than ordinary care and at-

tention to keep such an apparatus in running condition.

Of the currents from this machine, the best representative is what is termed the wave current. Various operators have subjected this particular current to modifications and variations, but for the purpose of this paper the original wave current will be used only. To produce this we use the positive pole for treatment, the patient being connected to this by a suitable wire. The negative pole is grounded to the water system usually. The current being unipolar and unidirectional, we must seat the patient upon an insulated platform, and with the poles together, the motor is started. As the pole pieces are gradually separated, the current jumps the spark gap, producing interruptions of an oscillatory nature. As these go on there is directly under the electrode a synchronous contraction and release effect which activates the tissues in a manner no other modality can. This oscillatory or wave-like action has the effect of expressing exudates from the tissues and entirely through the normal channels. When applied over an inflamed and swollen area, the result will be almost immediate. In case of a sprained ankle for instance, if applied within an hour, 1 or 2 treatments will remove all the inflammatory swelling and restore to normal without further treatment of any kind. When the current is applied over an inflamed nerve, the pain will be exquisite unless special care is taken to avoid such an effect, but after a few treatments the severe pain will gradually lessen until it ceases entirely.

The dosage is regulated by the width of the spark gap; therefore, when starting a treatment the gap should be very small and gradually increased. When given over the body area for metabolic effects there will be no need of taking this care, for there will be no pain. It has not been generally known that the static currents have distinct metabolic value, but this fact was established some years ago by a series of experiments carried on at the Long Island College Hospital by Matthew Steel, Ph. D., and the results of these experi-

ments were published in a paper (*A Study of the Influence of Electricity on Metabolism*), to which the reader is referred. These simply corroborated the clinical findings of those pioneers who demonstrated the value of the therapy, but until that time had no other confirmatory evidence than their experience.

The high frequency currents best illustrate the thermic qualities of electric currents, and at present writing are about the best known to the general profession. Diathermy is now being used all over the country, not only by trained electrotherapists but by mere tyros whose only knowledge and training is that received from the salesman whose importunities and promises of quick wealth from a greatly increased practice, have closed the deal. The only thing needful is to connect the patient and throw in 1 or 2 switches as the case may be, and all at once the start toward wealth is made.

Diathermy simply implies "heat through" and this expresses the current action. The heat is the result of the tissue resistance to the current as it traverses the tissues between the electrodes. This is its chief action, the result being an active hyperemia with its resultant phagocytosis, which naturally suggests its therapy. There is in addition, however, a subtle effect produced within the tissues that is not as yet fully understood, but which may account largely for some of the beneficial effects of its therapeutic application.

In using diathermy we must bear in mind its physiologic actions. Being a circulatory activator and of value generally where heat is indicated, it will be only natural for one to apply it to such cases as usually respond to such measures. There are 2 exceptions to this general rule that must be observed. These are, not to apply it when and where there is likely to be a hemorrhage, and also never use it in treating an area wherein there may be enclosed pus. If a hemorrhage is imminent, diathermy will bring it on and increase it to the danger point. If there is enclosed pus the danger of dissipating it throughout the system is great; therefore surgical interven-

tion should precede diathermy, and with free drainage, diathermy will serve the end sought.

When we say the heat is produced by its passage through tissues, we can readily prove it by attempting to treat such areas without lessening the skin resistance. It will burn so quickly that such an attempt will not be repeated. The skin resistance is greater than the underlying tissues so it is always necessary to make it moist first when applying the metal electrodes. Here is where there is some controversy as to the best method of moistening the electrodes. Some advocate the use of soapy water or suds, and others, some form of bland jelly for lubricating. There are 2 objections to these. One is that they offer added resistance to the current passage and the other is that there is more real danger of a burn. When soap suds is used there must be given an added amount of milliamperage to get the desired result. The danger of a burn is in the fact that the suds will dry out under heat and become an irregular surface for contact and, unless renewed from time to time, a burn may result. For renewal, of course, there must be a turning off of the current, so time is lost. Altogether the best all around thing to use is plain water. If the electrodes are well wet and applied carefully, held in situ by some proper method, there should be nothing but a good result without shutting off the current until treatment is concluded. This has been my experience in a considerable number of years practice with this measure.

Another thing to be considered is the avoidance of edge effects. By this is meant that the electrodes should be so placed that there will be an equal distance between all parts of the electrodes, thus forcing the current to traverse the tissues equally. The same thing applies when given by the cuff method, but the subject is too long for further elucidation here. When treating bones for a particular purpose, as for instance the femurs for anemia, we must remember that bone offers greater resistance than other tissues, and also

holds the heat longer, and we must regulate current dosage accordingly.

In a general way, the high frequency currents are not truly bactericidal, but certain bacteria will succumb to their action, largely through activated phagocytosis; there is a special action of direct nature upon gonococci and the tubercule bacilli under proper conditions.

This, in a brief and rather sketchy manner, portrays some of the current possibilities along therapeutic and other lines. To undertake to do it properly and completely would require a treatise.

"One more word" and this paper ends. There is one thing to which we object as trained electrotherapists, and that is the term "violet ray". This is the name given to treatments from a high frequency machine through a vacuum tube. It is a beauty parlor term and used alike in barber shops and such places, but is not found in the vocabulary of the trained professional man; therefore, the writer asks that all medical men avoid this in the future as applying to whatever treatments they may use. In the first place the current does not produce a ray. When it is projected through a vacuum tube there is a glow or effluve which takes a color according to the amount of vacuum. If a high vacuum, the color will be a pale blue; while a very low one will give a purple or if you prefer to call it violet, well and good, but this type of tube is not the usual one used. Generally it is a high vacuum with its pale blue color. The effect of this effluve is to produce a surface hyperemia, and so far as this has therapeutic value it belongs properly in the province of the medical profession and not in the barber shops or beauty parlors. It is entirely within the rights of medical societies to take this matter up and help to settle it properly once and for all time. Let us hope that the day is not far distant when the whole profession will become conversant with physical measures and take enough interest to stand together for the furtherance of all that is best in them and for their safe and sane use.

CLINICAL INTERPRETATION OF THE WIDAL REACTION

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The Widal reaction is not a test for typhoid fever but a procedure the sole purpose and result of which is to determine the presence in the blood serum of agglutinins for the typhoid bacillus. The term "Widal Reaction" as used throughout this paper refers solely to the agglutination test described by Widal (*Semaine Med.*, 1896:259) and applied by him to the study of typhoid fever.

Agglutination is the clumping or the adhering together in groups of suspended particles. Agglutinins are antibodies which possess the power of producing such clumping or agglutination and, like many antibodies, agglutinins possess a high *relative*, though not always absolute, specificity by virtue of which they agglutinate only the antigen whose interaction upon the tissue cells gave rise to their production.

As is well known, the defensive mechanism called into play by the presence of an infection in the human or animal body gives rise to certain specific means of defense or, in other words, to the production of specific antibodies the nature and character of which vary in accordance with the characteristics of the invading organism.

When the means used by the infecting organism to produce tissue damage is primarily a soluble (exogenous) toxin, the antibody produced to combat it is characteristically an antitoxin. When the toxin is endogenous—as is the case with the typhoid and other bacteria—a variety of antibodies of varying importance and effectiveness, among them agglutinins, are produced. This fact, coupled with the further fact that agglutinins are produced quite early in typhoid fever, led to the use of the agglutination reaction in the study and diagnosis of this disease.

There are 2 factors concerned in the re-

action: (a) the antigen (*B. typhosus*) which causes the production of (b) the antibody (agglutinin).

Agglutinins are assumed to have a double structure, possessing one part (receptor or haptophore) which unites directly with the bacillus, and a second part (agglutinophore) which is functional in character and brings about agglutination after the bacilli and the agglutinin have united. Under certain circumstances, such as the action of heat, age, acids, etc., the agglutinophore may be destroyed while the haptophore portion remains intact. When this happens the agglutinin becomes an *agglutinoid*, capable of uniting with the bacillus but incapable of causing agglutination—a fact of some practical importance as related to interpretation of the reaction as will later appear. The present discussion is not concerned with the site or manner of agglutinin production. It suffices to recall that (a) a definite incubation period after inoculation (2 to 4 days) is required for their production and that (b) they occur in the highest concentration in the blood, although they may be demonstrated in other body fluids.

As agglutinins are *specific* antibodies it is obvious that they may be used in either of 2 ways: (1) When the antigen is known, to determine the presence of the antibody. (2) When the antibody is known, to identify the antigen.

The Widal reaction in typhoid fever is an illustration of the first situation. In this instance the antigen (a suspension of known typhoid bacilli) is brought into contact with an unknown serum. If the specific antibody (typhoid agglutinin) is present agglutination occurs.

The second situation is illustrated when a Gram-negative, motile bacillus has been isolated from the blood, urine, or feces and it is desired to identify the organism as the typhoid bacillus. If when brought into contact with a known antibody (serum containing typhoid agglutinins) the unknown bacilli (antigen) are agglutinated in high dilutions, the specific immune reaction so evidenced establishes their identity as typhoid bacilli. The recognition

of an unknown antibody by use of a known antigen was the basis of the procedure devised by Widal in the study of typhoid fever, the only reagents required being the blood of the patient and a culture of typhoid bacilli. As originally employed—and to some extent still done—the test was made microscopically by diluting roughly a drop of dried blood, the dilutions usually being 1:40 and 1:80 or 1:25 and 1:50. Since the wide-spread use of antityphoid vaccination, however, this rough method has become inadequate and, moreover, it takes no cognizance of mixed infections, the possible presence of agglutinoids producing “prezone reactions”, or the presence of paratyphoid infections.

Serologists in general, therefore, are in accord in regarding the macroscopic quantitative methods as being far more delicate, reliable, and definitely interpreted. It is true that the macroscopic methods require the use of blood serum rather than dried blood, but sufficient serum may be obtained from as little as 1 c.c. of blood, an amount easily obtained by finger-prick even in the infant, and the results obtained more than warrant the extra trouble and labor involved. In the macroscopic quantitative technic a series of serum dilutions is made, usually 1:20, 1:40, 1:80 and so on as far as desired; 1:640 being the usual maximum routinely employed. Usually 3 such series are set up, one for *Bacillus typhosus*, one for *Bacillus paratyphosus A*, and one for *Bacillus paratyphosus B*. The advantages of such a quantitative set up may be brought out by considering the factors which may interfere with or obscure the reading or interpretation of the reaction.

(1) *Group Agglutination*. When first discovered typhoid agglutinins were thought to be strictly specific, that is, causing agglutination of typhoid bacilli only. Very soon, however, it was found that not only the specific organism (*B. typhosus*) but also other closely related bacteria (paratyphoid and colon bacilli) were agglutinated in *low dilutions* of the serum; when highly diluted only the specific agglutination occurs, however. When only low serum dilutions are used, therefore, the presence of colon agglutinins may be associated

with small amounts of group or partial typhoid agglutinins and so produce, to the uninformed, puzzling reactions.

Group agglutination of paratyphoid bacilli occurs with a definite number of typhoid sera, most often (approximately 10-15%) for *B. para B*. and infrequently for *B. para A*.

In the quantitative methods the degree of dilution eliminates nonspecific agglutination, and quantitatively measures, not only the degree of typhoid agglutination but also the degree of paratyphoid group agglutination.

(2) “*Prezone Agglutination*”. It has been noted above that the functional or agglutinating portion of an agglutinin may be destroyed, that such an imperfect antibody is then called an *agglutinoid*, and that an agglutinoid, while unable to produce agglutination, may still unite with the typhoid bacilli. Agglutinoids have been found to be present in freshly drawn serum which, as a result, though containing agglutinins, may yet show no agglutination—until well diluted. The reason for this phenomenon is that the agglutinoids, having a greater affinity for the bacilli than the agglutinins, at once unite with them and so prevent the union of bacilli and agglutinins and agglutination cannot occur. As the serum is diluted the concentration of agglutinoids decreases, and union with agglutinins and agglutination consequently occurs. Agglutinoids may be sufficiently active in dilutions of 1:40 or, rarely, in 1:80 to prevent agglutination, or at best permit only faint or doubtful reactions when only one or two dilutions of serum are tested.

In the quantitative method, however, while agglutination might be absent in the lower dilutions, it will be evident in the higher dilutions of the series and the character of the reaction made clear. Such a reaction—negative in low and positive in higher dilutions—is spoken of as a *prezone* or *proagglutinoid* reaction, a laboratory term which does not affect the significance of the positive reaction.

(3) *The Reaction in Vaccinated Individuals*. Antityphoid vaccination causes the production of typhoid and, now that only the triple vaccine is used, paratyphoid agglutinins. The qualitative reaction made with 1 or 2

arbitrary dilutions is valueless under these conditions. The quantitative reaction, however, may be utilized to secure quite definite information in the following manner. The first test records the degree of agglutination produced simply as the patient's norm in this respect, as it were. If upon a subsequent test, 7-10 days later, the titer of his agglutination reaction shows a definite increase, it is evident that he has produced a new and further supply. This production of antibodies could not occur, however, in the absence of the antigen; the antigen (*B. typhosus*) must be present, therefore, and the disease is typhoid fever.

(4) *Paratyphoid Infections.* The differential diagnosis of paratyphoid infections is impossible with qualitative methods unless, as is rarely the case, the serum is tested against these organisms. Even when this is the case, however, group agglutination may cause errors of interpretation.

Given a quantitative test in which agglutination occurs to an equal degree with all 3 organisms or, as is more common, with both *B. typhosus* and *B. para B.*, a rise in the titer of the etiologic organism upon a subsequent retest definitely establishes the nature of the infection.

(5) *Mixed Infections.* The detection of a mixed infection is only possible by the use of a quantitative technic. In such a case the serum is saturated with one of the suspected organisms and, after the agglutinins have attached themselves to the bacilli, they are removed by centrifugation and the serum again tested for agglutination by adding the second of the suspected organisms.

The rationale of this procedure is as follows: In a mixed infection due to 2 or more species of bacteria, there will be produced not only specific agglutinins for each organism, but group agglutinins also for each organism. Saturation of the serum with one of the bacteria removes not only all of the specific or major agglutinins, but also the greater portion if not all of the partial or group agglutinins. The major or specific agglutinin of the second organism is, however, not affected so that, on the addition of the second organism specific agglutination occurs, establishing

the presence of 2 specific agglutinins and hence of 2 antigens or a mixed infection.

(6) *The Prognostic Value of Quantitative Reactions.* It is an established fact that the agglutinating titer (or agglutinin content) of a serum has no relation to immunity and is no indicator of the degree of protection or resistance enjoyed by the individual. Relapses, for example, have occurred when the agglutinin content of the patient's blood was at its peak as first reported by Widal and Sicard¹ and since corroborated by many others.

Agglutinins play a purely secondary rôle in immunity, therefore, and are of value as suggesting the coincident presence of other more effective antibodies while also, probably, preparing the way or facilitating the action of opsonins or the occurrence of phagocytosis. In spite of these facts the quantitative reaction may be of some prognostic value as was first suggested by O'Hara.²

This observer noted that, without perceptible change in the clinical condition, a sudden and marked drop in the agglutinin titer of the serum was not infrequently of ominous import and the forerunner of a clinical change for the worse. While this is not invariably the rule and is subject to exceptions, some experience with the method warrants the periodic determination of the agglutinin titer at regular intervals during the course of the disease.³

CLINICAL INTERPRETATION OF THE WIDAL REACTION

As stated in the opening paragraph of this paper, the Widal test is not a test for typhoid fever. A positive Widal reaction means only one thing; the patient's blood contains agglutinins for the typhoid bacillus. To explain this fact, there are several possibilities all of which must be taken into consideration:

- (1) The patient has been vaccinated against typhoid.
- (2) The patient has had typhoid fever previously, recognized or unrecognized.
- (3) The patient is a typhoid carrier.
- (4) The agglutination reaction is non-specific.
- (5) The patient has typhoid fever.

There is, generally speaking, no definite dilution, a reaction in which on a single test is pathognomonic of typhoid fever.

The agglutinin titer after vaccination may be quite high: (1:640 or even over) and may persist for a long period; 6 years after his last vaccination the author's serum agglutinated *B. typhosus* when diluted 1:320. The same is true of typhoid carriers in whom a high agglutinin content is quite constant. Conversely, in typhoid fever, the agglutinin titer may show very marked variations from day to day.

The occurrence of nonspecific agglutination has been much disputed but it may be regarded as certain that it does not occur in high dilutions (1:100 or over).

A positive Widal in a dilution of 1:80 or over warrants a presumptive diagnosis of typhoid fever and the institution of typhoid precautions but the final and definitive information is obtainable only from repeated tests showing an increase in the agglutination power of the serum.

Regardless of the initial strength of the reaction *a consistently rising titer means the production of specific agglutinins, hence the presence of the specific antigen, and, therefore, the presence of the disease.*

This fact is of the greatest clinical value as an aid in the diagnosis of mild typhoid or paratyphoid infections so apt to be missed and hence of great importance to the community.

In the study of vaccinated individuals the quantitative Widal is of paramount importance, the first test establishing the agglutinin content of the blood for the typhoid and paratyphoid groups, the second being made to detect any increase in the titer which is, for the reasons stated above, of diagnostic import.

In the last analysis the most definite and clinically valuable information accrues from a series of tests rather than from a single examination.

It must be remembered that the presence of agglutinins is the result of tissue reaction, a specific response to a specific stimulation. A definite incubation period—which has nothing to do with the incubation period of typhoid fever—is required before they are produced in detectable amounts. As a rule, ag-

glutinins are not seen in typhoid fever before the seventh or eighth day, although, occasionally, they may be encountered as early as the third day.

The incidence of the reaction is usually about as follows:

First week: 10-20%.

Second week: 60%.

Third week: 80%.

Fourth week: 90%.

Second month: 75%.

It is important to remember, however, that:

(1) The patient may be so overwhelmed as to be unable to produce agglutinins until late in the disease, if ever.

(2) Occasionally, agglutinins are not produced until well into the convalescent stage.

(3) About 6.7% of cases never produce agglutinins.⁴

As a rule, the reaction gradually disappears after recovery; when a positive, and especially a pronouncedly positive reaction persists for months or years after recovery from typhoid fever, the suspicion that the individual is a carrier is warranted.

If it is remembered that the Widal test is not a test for a disease but a test for evidence of reaction to disease, its clinical interpretation will be greatly simplified. It cannot always be accepted at its face value but must always be interpreted in the light of all the other factors influencing a particular case.

And if the pathology of typhoid fever and the mechanism regulating the production of agglutinins are remembered it will be obvious that, in the study of typhoid fever, the procedures of value are influenced by the stage of the infection in which the patient is first seen, thus:

(1) In the first week, the disease being primarily a bacteremia, a blood culture is the examination of most distinct value.

(2) As the duration of the disease increases the incidence of positive blood cultures decreases and the incidence of positive urine and the feces cultures rises, and the Widal reaction reaches its highest incidence.

In any case, the trend of a *series* of ex-

aminations has immeasurably greater clinical value and significance than a single, isolated test.

1. Widal and Sicard: *Ann. l'Inst. Pasteur*, 1897, 11:411.
2. O'Hara: *Boston Med. and Surg. Jour.*, 1920, 183:3:77.
3. Kilduffe, R. A.: *Boston Med. and Surg. Jour.*, 1921, 184:12:306.
4. Moreschi: *Ztschr. f. Immunitol.* 1914, 21:410.

GASTRIC ULCER

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(Read at the annual meeting of the Society of Surgeons of New Jersey, Newark, January 5, 1928)

My excuse for the presentation of this time worn subject, aside from the request of our chairman, is that I had the fortune about 20 years ago, while an intern, to assist several different men in their operations upon ruptured gastric and duodenal ulcers. Those patients who were operated on in the first few hours, repaired and drained, did well, while most of those that were operated upon later, or had a more prolonged procedure, as a gastro-enterostomy at the time, died. Since that time I have been most interested in gastric surgery, and with your indulgence will dwell more on reminiscences and impressions than on statistics and conclusions.

Only very recently such men as Lewisohn, Horsley, Balfour, Charles Mayo, Crile, Lahey, and others, indulged in a round table discussion of this subject, and as Lahey says, "I feel sorry for the man who has to draw conclusions after reviewing these writings". The diversity of opinion is startling, and I feel that some middle ground should be reached for the guidance of the surgeon of limited experience until such time as a standard method of treatment is agreed upon. Such standard methods of treatment are now in vogue in surgery of the thyroid, the prostate,

the gall-bladder and other parts, and with uniformly good results; but our stomach cases do not show any such percentage of cures.

No one today can question the advisability of a thorough course of medical treatment, before instituting surgical measures, and such courses will cure or materially relieve ulcer cases which are uncomplicated by cicatricial pyloric stenosis, adhesions, contractures or chronic perforation.

Surgery is only indicated after such a course, where the symptoms persist, where there is repeated hemorrhage, recurrent ulcers, very high acidity, severe pain, or suspected malignancy. In this connection I would like to quote the statistics of the Mayo Clinic which show operation upon only 45% of the duodenal ulcer cases that come under observation.

Our modern methods of diagnosis, referring principally to x-rays and fractional gastric test, show but a small percentage of errors, so that today a surgeon may with comparative accuracy visualize the condition of the stomach, and generally plan in advance the line of operative procedure which he intends to follow.

Immediate operation for hemorrhage is to be condemned, until the patient is put into condition to stand the same, as death from gastric hemorrhage is very rare. We have made it a rule, learned in the war, never to operate on any patient whose blood pressure is under 80. In this connection, I would like to state that 30 c.c. of 33% Sol. Sodium Citrate intramuscularly, as recommended several years ago by Lilliendahl, has proved a very satisfactory coagulant. It will increase the coagulability of the blood 4 times in 45 minutes, the effect lasting with variable intensity for several days.

Posterior gastro-enterostomy, in the majority of cases of ulcer at or near the pylorus, gives a big percentage of cures, and has been the operation of choice in the average case; but not all cases are cured by this procedure, and it is on these that I would like to dwell.

European surgeons, and some in this country, have recently been treating gastric and duodenal ulcer by a partial gastrectomy, with

the idea of removing the lesion, and with it most of the acid producing area, thereby diminishing the chances of recurrence. I believe the middle ground I am trying to outline would indicate that only those patients who have had a gastro-enterostomy performed, and who present themselves with a recurring ulcer and high acidity, should have a partial gastrectomy. The technic of the procedure is not at all difficult, provided the stomach is not fixed, and in the cases which I have followed, the convalescence has not been at all stormy. The greater the obstruction at the pylorus, the better the results of gastro-enterostomy will be; also in ulcer cases of long standing, those with repeated hemorrhage, severe pain, and chronic perforation with adhesions. In operating upon the stomach it is most important that associated gall-bladder and appendiceal conditions should be sought for and receive appropriate attention at the time.

The operation of choice is the separation of adhesions, if present, local destruction of the ulcer with cautery, if accessible, and posterior gastro-enterostomy. The gastro-enterostomy permits the stomach to contract and empty itself with a minimum amount of effort, and highly acid gastric juice is generally neutralized by bile and intestinal juices. Ulcers on the posterior wall are best approached through a rent made in the gastro-hepatic omentum. If adherent to the pancreas, it may be gently separated, any oozing being treated by light cauterization.

Gastro-enterostomy alone, is usually sufficient in ulcers at or near the pylorus.

Of the operative mortality in gastric cases, 75% is due to pulmonary complications, generally listed as pneumonia, but more properly classed as pulmonary emboli. Leakage at the line of suture, and hemorrhage, contribute a smaller percentage.

Causes of unsatisfactory results following gastro-enterostomy are improper technic, resulting in a jejunal kink, partial strangulation of the loops of the jejunum in the opening of the mesocolon, jejunal ulcer, or stasis due to too small a stoma. Later, dietary indiscretions, and failure to treat or remove asso-

ciated foci or lesions, contribute another group.

Dr. Maurice Asher, of Newark, advises me that when gastro-enterostomy patients do badly, some weeks after the operation, they may be improved by gentle lavage with bicarbonate of soda solution. A duodenal tube should be used, only to the stomach mark, and the solution, 1 teaspoonful to 2 quarts of fairly warm water, should be run in and out a number of times. This should be done twice a week.

I have at present several cases of unsatisfactory gastro-enterostomy, some of which were performed by me and some that were done by others. They are a most discouraging class to deal with. I have disconnected some cases, where the original lesion was apparently healed, and the acidity was not excessive. I believe some of these cases of unsatisfactory gastro-enterostomy, excluding those with recurrent gastrojejunal ulcer, to have been cases in which the gastro-enterostomy was unnecessarily performed, the surgeon being too greatly swayed by the opinion of the roentgenologist and the finding of an apparent thickening at the pylorus. I am sure that I have been misled in this manner, and shall only do gastro-enterostomy in the future where there is a pronounced indication for the same.

Reliable statistics, excluding the Mayo Clinic, show that from 25 to 35% of ulcer cases treated by gastro-enterostomy alone complain of later symptoms, attributable to gastrojejunal ulcer, and I would like to endorse these figures as coinciding with my own observations; I am aware that the statistics of the Mayo Clinic show only about 5%, and can only explain this by their more careful selection of cases for operation, more thorough operation, and a most carefully supervised after-care.

The removal of distant foci of infection is absolutely imperative in dealing with ulcer cases, and I have often stated and still believe that dental infections play a very prominent part in the etiology, particularly when accompanied by a highly acid gastric juice.

No other condition demands such close co-

operation between internist and surgeon for successful handling as do these gastric ulcers.

X-rays, when used and interpreted by an expert, show only about 5% of error in gastric and duodenal work, and when checked up with a fractional gastric test, this percentage is still further narrowed down. Errors, however, sometimes do occur, and I would like to report 2 cases, each with a fairly large carcinoma of the posterior wall near the pylorus, which neither showed in the pictures nor gave evidence by the test meals. Because of persistence of the gastric symptoms, exploratory operations were done, a large section of each stomach was removed, and gastro-enterostomy performed. Both did exceedingly well and I had checked them up as probable cures, until very recently, while preparing this paper, a letter from a physician in a distant town detailed the present symptoms in one in such a way as to convince me that I now only have one probable cure in this class of case.

The very debilitated condition of many of these ulcer patients at time of operation calls for supportive measures in the line of blood transfusion, or hypodermoclysis, and a very careful selection of the anesthetic. I have used a duodenal tube, left in situ for several days for feeding purposes, in preparing some patients.

Regarding post-operative care, my patients have done better since withholding everything by mouth and supporting with rectal or intravenous feeding for about 4 days. I had previously given limited fluids by mouth in 24 to 48 hours. Morphine is used freely during this period; and fluids are very essential. We make it a point to get these patients up in a semi-sitting posture very quickly, in order to in some degree avoid a hypostatic congestion of the lungs.

Regarding ruptured gastric or duodenal ulcer, the very slow leaking kind are handled by nature with adhesions; the next degree are not so completely walled off and, if not promptly operated upon, may result in adhesions walling off a perigastric abscess. The largest collection of pus I have ever seen was evacuated from one of these cases. In acute rupture with leakage into the general peritoneal cavity,

the prognosis depends entirely upon the accurateness of an early diagnosis and laparotomy. It seems to me that we are seeing fewer of these cases in later years, probably because of improved methods of diagnosis and treatment. Several years ago I had a run of 5 such cases in a period of a few weeks—3 on my service at St. Michael's Hospital—but now very rarely see a case. Despite some opinion to the contrary, I am convinced that a local repair of the opening, and drainage, is all that is required in this condition, where the patient is already severely shocked; as a rule, they will respond later to medical care. I only recall one in which I had to do a subsequent gastro-enterostomy.

As a result of the preceding discussion I would like to draw the following conclusions, which I have adopted for the guidance of myself and associates in our stomach work.

(1) Use the utmost conservatism in operating upon ulcer cases, first giving a thorough medical course.

(2) Get the patient in shape for operation by rest and careful feeding, using a duodenal tube if necessary, blood transfusion, hypodermoclysis, etc.

(3) Do not operate in face of acute hemorrhage unless it is repeated, and then try and get the patient in the best possible shape to stand the procedure.

(4) Do a quick simple closure and drainage in acute rupture and institute treatment for shock.

(5) Separate adhesions, destroy the ulcer if accessible, and do a posterior gastro-enterostomy in the average case.

(6) Resect the pyloric half of the stomach only in cases of recurring ulcer with high acidity.

(7) Carefully look for and remove infected foci, particularly in the mouth. Also give attention to associated lesions found at operation, particularly in the gall-bladder and appendix.

(8) Give nothing by mouth for 4 days post-operative, maintaining nourishment by glucose and soda by rectum or intravenously, and saline by hypodermoclysis.

(9) Use morphine freely post-operative,

and get the patient up on a back rest as soon as possible.

(10) Keep patient under observation and insist on a soft, bland, well cooked unirritating diet, and frequent small feedings.

(11) Neutralize any excess of acidity with soda and magnesia given 1 hr. after meals.

(12) Remember that an unnatural condition has been created by your operative procedure, and that the patient must forever after pass up the big square meals of former days and readjust himself to his altered condition.

SYMPOSIUM

CONSIDERATION OF FRACTURES

(A group of papers read at monthly meeting of the Camden County Medical Society, January 10, 1928)

GENERAL CONSIDERATION OF FRACTURES

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In the diagnosis and treatment of fractures the necessity of keeping in mind the soft parts as well as the fractures, has brought about 2 schools, each of which lays stress on its own ideas. The old school set the fractures, applied splints, bandages and often pressure pads, getting good union in good position but giving little thought to the muscles, nerves or joints. The new school, led in France by Lucas Championiere, believes that good anatomic reposition is of much less importance than early massage. The modern school believes that both of these plans are perhaps equally important, and that while some good results can be obtained by either method alone, to obtain the best results the combined methods must be used and each modified to suit the case in hand for one principle is in no way contradictory to the other.

Anyone with much experience in treating fractures learns that an absolutely correct anatomic reposition is rarely obtained, and that the old-fashioned, cabinet-maker-like setting of our fathers was a myth. X-rays have shown this, and those who do open operations know how difficult it often is to get perfect reduction even with the bones exposed.

It must always be our duty to get the best possible anatomic position, end-to-end approximation, good alignment and no rotation. The importance of anatomic position in a large number of cases has been studied by the Fracture Committee of the British Medical Association, and the Fracture Committee of the American College of Surgeons headed by Dr. Scudder, of Boston. These studies show that when the anatomic result is good the functional result is good in 90% of cases; when the anatomic result is fair the functional result is good in 50%; with poor anatomic result the function is good in but 30%.

The British Committee concluded that: "Although the functional result may be good with an indifferent anatomic result, the most certain way to obtain a good functional result is to secure a good anatomic result. No method, whether operative or nonoperative, which does not promise a good anatomic result should be accepted as a matter of choice." My own feeling is that this might be stretched a little in the fractures of childhood.

It is thus of the utmost importance to effect reduction at the earliest possible time—a fracture that can be reduced without trouble shortly after it occurs is often difficult or impossible to reduce after muscle spasm begins and exudation and swelling has had time to occur. This early reduction, or setting requires the use of an anesthetic to secure muscle relaxation and to prevent pain. Reduction is accomplished by extension, manipulation, or angulation and manipulation, which can be done under the fluoroscope or by the guidance of x-ray films, made before and after the attempt at reduction, particularly the latter; it is wise to repeat these examinations in order to detect any recurrence of the deformity before it is too late. It is a mistake to put this off for 2 or 3 weeks.

Reduction by extension is accomplished by placing the limb in a position of muscular relaxation and then making extension by the use of weights, either through some modification of a Buck's extension or by the use of skeletal traction, the latter being much more effective. I have frequently seen a fracture of a femur easily reduced by tong extension after prolonged efforts by plaster skin traction had failed. In selecting any method of treatment, in so far as it is possible, we should use a scheme that will allow joint motion. This plan has advanced very materially since the World War and in my judgment it is one of the most important advances made. The Balkan frame, the Thomas splint, and later the Russell Method, are all excellent in this respect.

A man with a stiff knee will get very little satisfaction in knowing that his fractured femur has healed with a perfect x-ray result; indeed, it may be more desirable to have non-union in a fracture than to have an ankylosed joint. The function the bone performs must be kept before us: whether it is to bear weight as in the leg, where it is important that the bone be strong and the legs equal in length; or in the forearm where complicated movements are made.

The success of any method of reduction hinges largely upon a knowledge of the anatomy involved. We must know the character of the bone, kind of fracture, action of the muscles, whether the nerves or vessels are hurt, and whether a stiff joint is likely to result.

It is a great comfort after the occurrence of gangrene, nerve or ischemic paralysis, or ankylosis, to look back on a note made at the time of the first examination and find that this calamity had been foretold.

I feel that we should all be slow to criticize adversely the result obtained by another, for no one can always get perfect results and in look-over an end result we can not always visualize the original injury with the difficulties involved. Besides, such criticism is often not only unjust but it frequently leads to a patient's dissatisfaction with the original practitioner; indeed, I suspect that nearly all dam-

age claims made in fracture cases have their origin in some unguarded remark made by a doctor.

It is illuminating to reminisce on a fracture clinic 10 years ago and then compare it with a similar clinic today. Take for example the Out-Patient Department of the Cooper Hospital; formerly the patients came into the general clinic, had their fractures reduced and returned every few days to have the splints and bandages changed. If a joint was stiff an anesthetic was given, "passive motion" was used with a rough hand, and it took years to find out how much harm this did. Now, there are 6 rooms for massage, baking, and other physiotherapy, and, in addition to the doctors there are 2 very much over-worked technicians in constant attendance. The aim of the present day being to get the injured person back to work in the least time with the best possible function.

I want to read here the outline of treatment of fractures adopted by Dr. Scudder's Committee.

I. First Aid.

Every effort should be made to avoid any injury additional to that of the original trauma.

1. "Splint 'em where they lie!"
2. Avoid every unnecessary manipulation.
3. Transport with extreme care.
4. Treat any existing shock.

II. Examination.

As complete and thorough an examination as possible should be made without causing any additional injury.

1. Begin with painless procedures.
2. Search for crepitus and abnormal mobility only when these symptoms are absolutely essential. The manipulation required to elicit these cause additional injuries.
3. Rule out, if possible, other associated injuries, especially those of nerves.
4. Elicit objective symptoms, which will be painful, only under an anesthetic.
5. Roentgen-ray examination should be made as early as possible; roentgenograms should be taken in two planes, stereoscopic

when necessary; should be of sufficient size, and should be studied with detailed care.

III. Diagnosis.

The simple diagnosis that a fracture exists is not sufficient. All details of pathology of the soft parts, as well as of the bone, should be considered, so as to visualize properly the problem of obtaining and maintaining reduction as well as the problem of repair and its probable duration.

IV. Treatment.

Each fracture should be considered as an individual problem and the treatment directed not only to the injury of the bone but to that of the soft parts as well. The pathologic changes following a fracture interfere markedly with the ease of reduction of displaced fragments. These changes begin very soon after the injury. Infiltration of the adjacent soft parts, coagulation and later organization of the blood are the most important.

1. Obtaining Reduction.

(a) Reduction of any existing displacement should be made as soon after the injury as possible, without waiting too many hours for the roentgen-ray examination.

(b) Reduction should be as gentle as possible.

(c) Reduction should be as complete as the individual case requires.

(d) Reduction may be controlled by fluoroscopic examination in appropriate cases.

(e) Reduction should be checked by a roentgen-ray examination as soon as practical.

(f) Manipulation should be carried out under an anesthetic with but few exceptions.

(g) Further attempts at reduction should be made as soon as the need is recognized.

2. Maintaining Reduction.

(a) Decide in each case the peculiar problem presented, and select apparatus accordingly, both for immediate and subsequent use.

(b) A decision should be reached as to how early such apparatus can be temporarily discarded to allow for massage and motion, and how long it should be worn, in order to protect against further injury.

(c) Repair in cancellous is more rapid than in cortical bone.

(d) Rapidity of repair will depend very largely on the blood supply of the fragments.

(e) The atrophy of disuse must be borne in mind.

(f) The inherent value of any apparatus is of less importance than the skill with which it is used.

3. Plaster of Paris.

Circular plaster bandages are permissible only when completely divided in at least one line.

4. Massage and Movements.

If carefully and gently carried out, massage and movements can be of the greatest help. If roughly performed, they may do considerable harm. One must differentiate under massage, between:

(a) Gentle stroking without deep pressure.

(b) Stroking with deep pressure.

(c) Kneading.

One must differentiate between:

(a) Guided active motion.

(b) Unaided active motion.

(c) Passive motion.

With these differences in mind, the various forms of each may be begun as soon as there is no danger of any additional injury or any displacement of the fragments resulting. This gentle massage and movements may cause discomfort but should never cause actual pain. The pain of forced passive movements usually means harmful stretching or tearing of soft parts, with additional necessary repair.

OPEN OPERATION FOR FRACTURES

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In discussing open operation for fractures I am constrained, even though it may seem presumptuous, to express some views that have taken shape in my own mind in my limited experience in fracture work. There is a manifest awakening in the matter of treating fractures so that what might have been counted good results in certain complicated fractures 10 years ago would now be regarded as poor indeed.

Open operation is not to be vaunted as a universal procedure in fractures, neither is it to be held in abeyance in certain cases of fracture. Time honored methods are still to be held in high repute where good apposition and sufficient immobilization can be maintained. Let us say, too, that open operation in children under 14 years of age is seldom indicated or required, because of the tendency of most flagrant bone distortions from fractures in children to correct themselves with time. I took occasion to prove this in a case of a boy aged 8 who suffered a peculiar telescoping fracture of the upper third of the femur. The patient was most obstreperous under the immobilizing and extension restraint, and the immediate end-results, judging from roentgenograms were almost an occasion for lachrymose exhibition of chagrin. However, I asked to be allowed to examine the boy after a year and to my joy the correction was amazing. Where the shortening had been $1\frac{1}{2}$ in. it had reduced to less than $\frac{1}{2}$ in., and where the fracture weld had looked like an irregular, circumferentially attenuated plumber's lead pipe joint, it had reduced itself so as to be but little above the normal diameter.

But, we cannot look for such favorable transitions in the adult, for shortenings that are manifest in the immediate end-result are permanent and the consequent functional crippling of such abbreviations can well be imagined. So, open operation is frequently necessary; first, to expedite repair; and, second, to insure best functional results. In fractures of the patella where there is any separation of fragments, open operation is always indicated. For some years I have been accomplishing this operation with absorbable sutures and very satisfactory results.

A few years back I was invited by my much appreciated friend, Dr. Roberts, to his home for a meeting of the Cooper Hospital staff to hear a discussion by Dr. Nassau on open operation for unusual fractures. He detailed his very exacting technic in applying Lane's plates and I was wonderfully impressed. I am sorry to say that Lane's plates have not been a boon in my hands.

Compound fractures, of course, are always

open, but my conviction is that openings should be enlarged, wound cleaned, devitalized tissue removed, bones aligned and established in proper apposition. Also, that the operation should be accomplished in a very few hours, the fewer the better, but certainly in less than 24 hours after injury. My preference in these cases is for plaster-of-Paris encasement immediately following operation. I have handled some cases, results of gunshot wound, with fragmentation of bone and lead pieces scattered through soft parts with uniformly good results.

Dr. Scudder, in an article in the American Medical Association Journal, divides fractures into 3 classes: (1) those that never should be operated upon; (2) those always operated upon; (3) those in which operation must be looked upon as of doubtful applicability. In the third class falls what I regard as the bugbear of surgeons in the category of fractures, viz., fractures of the femur. True, we may have a fractured femur with little or no displacement, and then the course of treatment is simple. But if manipulation, extensive suspension, etc., does not bring about a major degree of approximation, then open operation is the procedure of choice.

Again, I feel that each case of fractured femur should be approached with a bold and decisive attitude, and if so-called bloodless methods are unavailing, then open operation should be undertaken without unreasonable delay. Theoretically, plates are fine for the femur, but the sum total of my experience with Lane's plates is not joyful to reflect upon. Certain special and oblique fractures of both bones of the leg, in the middle or lower third will sometimes require operation, and here I cleave to the sliding bone graft as especially useful.

Fracture of the head or neck of the radius, fracture of the olecranon with separation, fracture of the shaft of the radius with displacement; these, quoting Scudder, should be operated on. These latter may be plicated with silver wire, and though I stated my aversion to Lane's plates because of frequent infection, I extol silver wire because I do not remember infection in any case where silver

wire was used. I have used silver wire successfully in tibial approximations.

I have talked somewhat glibly about open operation for fractures, but please do not think that I consider lightly the magnitude of the task involved. I have discounted Lane's plates, but that is no reason why they should be generally taboo or thrown into discard. Dr. Nassau lauded Lane's plates and Dr. Sherman, of Pittsburgh, has perfected what he calls a meticulous technic which enabled him to implant 50 plates with infection in but 1 case. Certain it is that one who essays to invade the sacred precincts of a large bone, at least must exemplify a meticulous technic if he wishes to avoid disaster.

I have detailed several fractures that need open operation, and, of course, this list may be multiplied. As to what to do in individual cases, the surgeon must judge. Open operation may entail nothing more than extra advantage obtained to reduce. Certainly implantation of metal substance should be avoided if possible, because of tendency to produce bone degeneration. Albee rails upon plates with vehemence, and features in his work many pictures of disaster on their account. There are cases, especially in femur fractures, where plates seem to be the only recourse. The preponderance of opinion, however, inclines toward removal, because bone degeneration which is not immediately manifest may become apparent after a time. Sliding bone grafts in long bones, where practical, is worthy of commendation, and, of course, is the treatment par excellence where nonunion has been manifest.

The question arises, "Who are worthy to play in such a superlative rôle?" Certainly not the unsophisticated. And might I warn the novice in surgery to "lay off". Scudder states that there are 12 hospitals only, in the United States, with armamentarium fitted to exercise the ultra degree of operative fracture work. Whether this be true I will not attempt to argue, but it does give credence to the idea that the treatment of fractures constitutes a specialty in itself, and I predict that the time is not far distant when this work will be largely wrested from the general surgeon

and placed in the orthopedist's or fracture specialist's hand. I am not holding any brief for Dr. Buzby or others, but I am simply expressing my convictions. Certain critics who rail upon the specialty forum may sound their declaiming invectives, but let them beat their tin pans, for truth will prevail, and the best qualified, and I aver that these are the specialists, will prove their worth and will be found in the forefront of that ever-moving column that is marching steadily and triumphantly onward toward new and better achievements.

NONOPERATIVE TREATMENT OF FRACTURES

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It is obvious from the foregoing papers, that no standard method may be applied to the reduction of any type of fracture, and that each must be treated individually and be a law unto that particular fracture. The treatment of fractures is the careful attention to details, and it is the details that I wish to emphasize.

In treatment of fractures, be it operative or nonoperative, one should always keep in mind the ultimate result desired, that is, mainly, an early and complete return to normal function.

I think that it will be well to consider the 3 most important factors in the order of their rotation: first, reduction which should be as early, as complete, and as painless as possible, under whatever form of anesthesia you may choose; local or general, what is most important is complete anesthesia, one which permits of complete relaxation of the structures involved. In this matter of anesthetics, men will disagree. Some saying that only a first-stage anesthesia is necessary; this is probably true of that group of fractures which is almost immediately recognized as being easily reduced—mainly incomplete, greenstick, or fractures without displacement. The advantages of complete anesthesia are: a patient under control; relaxation of the parts to be

manipulated; probably most important of all, the least possible trauma to already injured tissues; and, of course most important to the patient's mental attitude, no pain or sense of handling of broken bones, which I assure you is a very nauseating procedure to some patients.

An incomplete anesthesia is then to my mind excusable only from the standpoint of some grave contraindication; but then one always has recourse to a local anesthetic.

In the reduction of fractures, even though it is very desirable it is not always necessary to get perfect anatomic relationship in order to procure a good functional result. This is particularly true of fractures in young children. However, never allow the fact that it is a child to influence you not to strive to obtain the best anatomic alignment possible; this, I am sorry to say I have seen happen.

Reduce the fracture as completely as possible and with the least amount of handling and trauma of the already injured tissues. How many times have all of you seen severe traumatization increased by careless and unnecessary manipulation, as may sometimes happen under incomplete or poor anesthesia.

Aid of the fluoroscope should often be sought as it will materially aid in the reduction, will tell you the best position to fix the bones after reduction, as in many cases of fracture of both bones of the forearm, and will also enable you to ascertain that certain fractures are irreducible or that even after reduction is accomplished it may be impossible to maintain the position desired. I believe that the fluoroscope has its greatest value in fractures of both bones of the fore-arm and of those about the elbow joint. The old question of fractures of the fore-arm is that of fractures above or below the insertion of the pronator radii teres, and of dressing the arm in pronation or supination. This, I think should be disregarded and the arm placed in that position which has been very aptly described as the position of equilibrium, which is simply the position where the bones maintain their reduction regardless of the site of fracture. In fracture above the condyles of the humerus, particularly those in

which comminution is present, the fluoroscope is invaluable. At the same time I know of no fracture that needs more careful attention in the way of an early reduction, for your ultimate outcome in this type will usually depend upon the first treatment.

I have seen a good many cases where an attempted reduction shortly after the time of fracture had for some reason or other proved unsuccessful and was laid over for a period of 12 or 24 hours, when any further attempt was impossible because of the great amount of swelling and hemorrhage about the joint; then follows the bad result and the waste of much good physiotherapy. Persistency and use of the fluoroscope might have avoided these most undesirable features. I say might have, because these fractures about the elbow joint are exceedingly difficult to deal with. The main point I wish to emphasize is early and complete reduction, with greatest emphasis on "early".

As regards retention or splinting, generally speaking, the material which most nearly meets the ideal requirements is plaster; its greatest advantage resting in the fact that it can be very readily moulded to the part, thus getting practically an absolute fit. Stock splints or sets of splints are not to be recommended, because the fracture usually has to be made to fit the splint instead of the reverse. Although the Thomas splint and the Balkan frame are admirable apparatus for the treatment of fractured femurs I am of the opinion that we may at times be tempted to make the fracture fit the apparatus, unthinkingly of course, and in this manner get not so good a result as we had intended; or, at least, we increase our difficulties during the course of treatment.

Plaster certainly is of greatest value in treatment of certain fractures: in those of the tibia and fibula it is indispensable; in fractures about the knee joint; fractures of the vertebrae; particularly valuable in fractures of the upper-third of the humerus and about the shoulder joint, because of its being so easily moulded to fit the part. It should always be remembered that wherever possible the

plaster should be split to allow for swelling.

At this point, I would like to speak of the application of circular strips of adhesive directly over or adjacent to the site of fracture. In spite of the fact that we often see it done, it is a practice to be condemned because it is painful, liable to increase swelling, will almost certainly misplace the fragments, and has no particular advantage over careful bandaging.

After reduction and fixation, it is important to watch carefully the progress by frequent x-ray studies; early, to ascertain if there has been any change of position of the fragments; later, to determine the amount of callus.

Do not remove splints too soon. Remember that callus is sometimes soft even after 3 or 4 months. And by the same law do not allow the splints to remain on too long, as atrophy of disuse and ankylosis follow sooner in some patients than in others. Make each case a law unto itself. Do not simply say Colles' fracture, 4 weeks of splinting, etc.

The above facts of course can only be ascertained by your own undivided attention to each fracture.

Restoration means the complete restoration of normal function in the shortest possible space of time. Those who have condemned physiotherapy have used it too late or unintelligently. Use physiotherapy early and you will get better results and will not have to continue the treatment so long; unless something contraindicates start with the second dressing. This usually calls for very gentle passive motion, gradually increased, but never to the point where pain or discomfort is produced, and certainly not severe enough to produce swelling. Next in order is gentle massage followed by guided active motion; never give more than passive motion or very gentle massage in the presence of soft callus.

It is not the intention of this paper to go into details of the manners and methods of the various forms of physiotherapy. It may simply be stated that baking and diathermy are very valuable in the restoration of stiff muscles; electricity for the restoration of nerve function; the quartz light and hydrotherapy in the form of the Scotch douche or the

whirlpool baths are extremely valuable in the restoration of the superficial and deep circulation of the blood and lymph.

To sum up: reduction as early as possible; as complete with as little and as gentle manipulation as possible; under anesthesia using x-rays and the fluoroscope; proper and comfortable splinting; frequent check-up; early physiotherapy; and a quick return to normal function. Good treatment of fractures lies in careful attention to all of the foregoing details, and in no place in surgery is attention to detail more important in order that you may secure a good result.

THE END-RESULTS IN FRACTURES

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In discussing the end-results in fractures, one must consider what really constitutes an end-result and then judge the final analysis after no further betterment can be attained. This judgment is based on several important things. First, on length of time. I do not believe that the end-result in a fracture should be considered in less than 2 or 3 years; and when I say that, I mean fractures which do give some disability. Second, on the anatomic position of fragments; condition of the approximating joints, type of fracture, and the different bones involved.

In order to determine percentage disability, a surgeon must have had contact with a very large number of cases. How well I remember experiences of 10 years ago when I first began awarding disabilities percentages. I gave very large awards then, but having had the opportunity to view these cases over intervening years now find they have improved considerably. Cases at that time to which I gave 40 or 50% disability would now be given only 10 or 15%; due to the fact that I have the

opportunity to see the end-results of injuries after several years have passed.

We know that if the anatomic position of the fragments is good, we shall get relatively no loss of function; if all other things are equal. It is not the fracture itself that gives the disability, but loss of function in surrounding parts. Then again, the type of fracture must be considered. Compound fractures always give greater disability than simple fractures. We know that fractures which are complicated by massive crushing or injury of the surrounding nerves or blood-vessels, also give a large percentage of disability.

Early physiotherapy with reëducational exercise have brought about a great change in the final solution of fractures; as I believe long fixation without physiotherapy has brought about very bad disasters. You know that nonoperative cases give better end-results than operative cases. This is because cases that require operation are usually more severe and more difficult to handle than are the non-operative cases.

Then, it is a fact that fractures in children give better end-results than in adults. In looking back, I remember many cases in children and I have failed to find a very bad end-result in a child when more than 3 years had elapsed after the injury. This is especially so in femur fractures and in fractures around the elbow, where some of the most hopeless appearing cases at the time of accident show splendid end-results.

I would rather have a deformed fracture of both bones of the fore-arm, if grasp, wrist, and elbow functions had been given early restoration, than a simple fracture of the fore-arm without this attempt at early restoration.

After discussing generalities, it would be better to consider the separate fractures in relation to anatomic positions. It seems to me that we should begin with the comminuted fracture of the lower end of the radius, known as Colles' fracture. In this type of fracture, when the fragments are in good position, there should be very little, if any, loss of function. The temporary disability lasts about 6 weeks, and this can even be cut down to 4 or 5 by massage. In another type of Colles' there is

comminution and posterior displacement of the lower fragments, which usually gives considerable disability consisting in limited dorsal and palmar flexion and some lessening of the grasp, and usually a deformity. And yet, some of these wrist fractures with deformity attain unusually good function. I find also that in the comminuted Colles' fractures, there is considerable loss of supination and pronation, or what I call external and internal rotation of the wrist. This is due to the fact that there are adhesions formed in the radio-ulnar joint. Wrist fractures give very bad end-results in the aged because adhesions involving the tendons of the fingers induce loss in palmar, dorsal, radial, and ulnar flexions. In my opinion this is especially true where long fixation is maintained without early physiotherapy.

Among wrist fractures those of the carpal bones are most important, especially those affecting the scaphoid and semilunar bones; both these fractures give exceedingly bad results even under the best of treatment, and the final percentage of disability is very high. I believe, however, in regard to scaphoid fractures, that if the proximal fragment is removed early and this is followed by early physiotherapy, a better result is attained; and yet I have only seen 1 or 2 scaphoid fractures which have come through without any disability. Most all these cases have from 10 to 20% loss of use of hand. In the semilunar fractures, removal of the entire semilunar gives the best result with least percentage loss of function.

Fractures of the elbow consist of supra-condylar fractures, fracture of external or internal condyles, fracture of head of radius, and fractures of the olecranon. The greatest disability in elbow fractures, with exception of the olecranon, is lack of flexion and if elbow fractures be treated in the Jones position with acute flexion we have already overcome the greatest obstacle. About 10% of all elbow fractures give bad results no matter what treatment has been given nor how skillfully it has been applied. This group comprises the cases in which there has been displacement of the fragments, with resultant bony block

in the joint, which limits extension and flexion. In children, the end-results are surprisingly good, and I have seen a great many elbow fractures which looked discouraging at first but which, after a considerable time turned out very well. I want to say here that we must not look for good results in too short a time; the time required may be from 1 to 3 years. I believe this is not true in adults, as the average elbow fractures which do not show good results within 4 months will certainly give a considerable percentage of disability, and I cannot emphasize too strongly the early use of physiotherapy in these cases after placing the arm in an acute angle. In connection with elbow fractures, especially in children, one must not overlook that condition which, when not recognized, may lead to an almost total disability of the arm; I mean Volkmann's contraction. This occurs especially in forearm and elbow fractures where, either due to swelling or tight bandaging, there has been interference with the circulation and pressure sloughing brings on an ischemic myositis; the fingers become flexed in rigidity; the wrist becomes extended; atrophy occurs in the interosseous, lumbrical, and forearm muscles. There is usually also an involvement of the median, ulnar or radial nerve which causes some paralysis. If discovered immediately treatment is helpful but if allowed to go on for a few days not much of anything can be done. There have been attempts to free adherent nerves and dissect away the separate muscles, but with little promise of any great improvement. I speak of this fracture tragically because it is so often overlooked and brings such disastrous results. You will appreciate the danger of this condition in children especially if the forearm and upper arm are badly swollen and an attempt is made to put it in Jones' position or to apply a tight splint like the Strohmeier. This disability is usually a total disability of the arm.

When we consider shoulder fractures, we must include the upper end of the humerus and those involving the scapula. Of course, as you know, scapular fractures are quite rare and, as a rule, come through with very little disability except when the glenoid cavity is involved. When we consider the anatomic and

surgical neck fractures of the humerus, I cannot say that these give such a high degree of loss of function, as they usually recover with slighter loss than we would at first expect; especially true if they have been treated by right angle extension. They do result in limitation of abduction.

I do believe, however, that there are a considerable number of these fractures which are complications of wrist fractures; that is, a man will fall on his open hand and have a Colles' fracture, which is treated by his physician, while an impacted fracture of the shoulder is not observed until after symptoms of the wrist fracture have subsided; the man then complains of considerable pain in the shoulder and roentgenogram reveals an impacted fracture. These, in my opinion, are the cases which give the greatest disability. The unrecognized shoulder fracture produces inability to raise the arm from the chest; a disability which is very difficult to overcome and which gives a considerable loss of function.

Fracture of the head of radius gives but one loss of function and that is loss of rotation of the elbow due to tearing of the orbicular ligament. If the head of the radius is not removed by open reduction, this disability lasts and is never overcome; but where the head of the radius is removed early, the end-result is much better.

When we consider clavicle fractures, it is a fact there is usually no disability if the fragments are near approximation and show good union. If there is deformity with overlapping, there is usually shortening of the width of the shoulders and, in children, often a lateral deformity of the spinal column.

We should dwell for a little time on pelvis fractures. It has been my experience that the majority of pelvis fractures give fairly good results. It is claimed by Dr. DeCosta that toe-drop is a common complication following pelvis fracture, yet, I have found but one case of toe-drop in the last 4 or 5 years. I do believe, however, that those cases in which the urethra is ruptured give a long temporary disability and very often, under even the most skillful care, there will result a decided permanent disability due to the fact that there

must be constant sounding of the urethra for years to overcome contraction.

I believe it is the concensus of opinion that most femur fractures turn out well. There are certain rules that constitute a good result in femur fractures:

- (1) That firm union is established.
- (2) That the long axis of the lower fragment is either directly continuous with the upper fragment, or nearly so.
- (3) That the anterior surface of the lower fragment maintains nearly its normal relation with the plane of the upper fragment.
- (4) That the limbs are equal or have shortening from $\frac{1}{8}$ to 1 in.
- (5) That lameness is not due to shortening of more than 1 in.

I might add here that I believe that anything under 2 in. shortening does not cause lameness due to compensation of the lower spine. I believe that all femur cases in children turn out well, as I have yet to see a bad result after 3 or 4 years. The most serious femur fractures are those near the knee joint with posterior displacement of the lower fragments, as this limits flexion in the knee. The cases which give the highest disability are usually in people past 50 years of age.

It has been my experience that about 50% of all patella fractures give perfect function, both in operative and nonoperative cases; that 50% show signs of weakness, limitation of flexion, and inability to go up and down stairs, a condition for which I have not been able to find the cause. I am inclined to believe it is due to weakness of the vastus medialis, or possibly to adhesions of the patella tendon. There is also in this last 50% of cases inability to kneel and crepitation in the joint.

Fractures of the upper third of the tibia give good results and are usually short in their temporary disability and small in permanent disabilities.

A fracture of the lower third of the tibia gives the most disastrous result, owing to the fact that this site is more prone to nonunion than any other part of the body and, very often, because after the case is placed in a cast, which is frequently done, there has been no regard for position of the foot, which may

have been turned in varus or valgus and have misdirected the lines of force so as to give the man an inability to walk or stand. These disabilities average from 30 to 40% loss of foot.

Fractures of the os calcis and astragalus cause great disability and discomfort. When the astragalus is fractured, it usually becomes displaced and makes painful motion in the subastragular joint; likewise the os calcis. As a rule, we find when either of these bones is broken the other is also fractured, which is a complication. The os calcis fracture, if not treated immediately and properly, gives one of the most disabling results of any fracture. It is accompanied by a painful motion in the subastragular joint and a painful outgrowth below and back of the external malleolus, with spur formation on the plantar surface and a general flattening of the foot. As you know, the anatomic relation of the sole of the foot is a very complicated one. The plantar ligaments are attached to the lower surface near the os calcis, as is also the plantar fascia, and of course these become torn away allowing the arch to drop so that the man is crippled. Any spur must be removed and the arch of the foot must be well supported, and if there is an offending piece of callus below the external malleolus it should be removed. Under the best treatment, these fractures often times give disastrous results.

End-results in spinal fractures must be considered according to type. It has been my opinion that if attention of the patient is not directed to the fact that he has a fractured spine he will not lose that special morale which, when lost, helps to draw a peculiar picture of traumatic neurosis. I have seen fractures of the transverse and spinous processes of 2 or 3 vertebrae and, attention of the patient not being called to this fact, he recovered without discomfort or disability and went back to industry perfectly able to do his former work. I believe that in rare instances transverse processes, in fracture, have to be removed because of pain but this is rare.

When we come to discuss fracture of the vertebral body, those crushing fractures, we have another situation. I believe, however, that if the patient is kept quiet in bed in a

horizontal position, and after a few days a properly applied body cast followed later by a spinal brace, he will do very well. Most all of these cases come through with a lower disability than one would have expected. Of course, I am talking of cases in which there are no spinal cord involvements. I do believe that we must guard against post-traumatic spondylitis, a condition of which orthopedists talk a great deal but of which I have seen but little. The temporary disability of a man with a crushing fracture of the body of a vertebra is 8 to 11 months. Massage and baking should be kept up while he is wearing the brace, so as to prevent atrophy. The average is 30% total disability in these cases, and the great majority cannot return to hard labor.

I will not go into the end-results of skull fractures except to say that a considerable number of them show, after a period of 1 yr., symptoms of traumatic neurosis. This is especially true where there has been a cranial deformity such as remains from decompression or trephining.

There is one small bone which does not seem important to the average surgeon or general practitioner but which is more often fractured than most other bones, and that is the metatarsal. These fractures give decided disabilities because we have treated them for a period without providing proper arch support followed up by ordering orthopedic shoes, or the patient walks too soon upon the fractured metatarsal and causes tearing away of the arch. I am now giving more attention to metatarsal fractures than heretofore and allowing men injured in industry a larger temporary disability, and I find this is cutting down the permanent disability in such cases.

We must not close this paper without considering fractures of the jaw, a condition which has been revolutionized in the last 3 or 4 years. It was the custom before that time, with the average surgeon, to treat these cases with a Barton's bandage, or they even went so far as to use interdental splints. These latter have been almost entirely discarded and dental surgeons are now using intermaxillary wire with the upper jaw, as a splint, and getting the teeth into proper articulation, with a

very early reduction and the removal of all teeth and fragments of bone in the line of fracture. In the cases having infection they use external incision and drainage. The prognosis is good and very few permanent disabilities arise when cases are treated this way.

Fat embolism, as an end-result, must be considered seriously. I have had 3 deaths in the last year due to fat embolism following reduction of a fracture. Fat globules enter the venous paths and, lodging in the brain or pulmonary capillaries, cause death by asphyxiation or coma. This fatal condition never occurs in the first reduction, but usually follows the second or third attempt.

Concomitant injuries following fractures, by which I mean nerve injuries such as involve the musculospiral in fractures of the humerus, remain to be considered. Injuries to the musculospiral nerve are either immediate or secondary. The immediate is due to direct injury or to the fracture itself. The secondary is due to callus formation with pressure or stretching which is gradual in onset. The end-result is fairly good where the nerve can be freed from pressure. The length of disability is from 8 to 12 months, usually, after suturing of a lacerated nerve. I have had about 10 cases of musculospiral nerve injury due to fractures and have operated upon all these. They were sutured and, when the nerve was found to be cut entirely through and to have an intervening neuroma, I always excised the neuroma, sutured the nerve, and then transplanted the flexor carpi radialis tendon into the extensor communis digitorum tendon, with splendid end-results.

The ulnar nerve sometimes becomes involved in bony callus in the ulnar groove, in intercondylar fractures, and after it is lifted out of its bony bed and placed in the anterior surface of the fore-arm surrounded by tabs of fascia, the end-result is amazingly good.

In conclusion, it is my belief that, after all, we must not treat the fracture condition alone but we must consider the surrounding tissues, keep them in healthy condition, prevent atrophy from disuse, and give early physiotherapy, which latter I believe changes the entire picture in fractures and reduces the disabilities 50%. I believe, however, that physiotherapy

in the hands of the average general practitioner, and even the surgeon, is far from what it should be, and that if these fractures, after union has occurred, be placed in the hands of a properly trained physiotherapist our fracture problems will be changed entirely and the patient will be able to return sooner, and with less disability, to his occupation.

MECKEL'S DIVERTICULUM AS THE CAUSE OF INTUSSUSCEPTION

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While Meckel's diverticulum is an occasional cause of mechanical intestinal obstruction by virtue of adhesions or congenital bands constricting the bowel, obstruction due to a free Meckel's diverticulum is exceedingly rare. Ochsner, while mentioning the possibility, cites no cases and Grulee¹, though noting the possibility of intussusception of Meckel's diverticulum with resultant intestinal obstruction, cites only the case reported by Wright with prolapse of the everted intestine through the umbilical opening, a situation not comparable to the case herewith reported.

The only case of true intussusception due to a Meckel's diverticulum revealed in a fairly extensive search of the literature is that reported by Morison², to which reference will again be made later.

Meckel's diverticulum is found in children with a frequency of 1 to 60, or 1 in 100 according to Bienvenu³. It is usually about 3 in. long, although extremes have been recorded of less than 1 and more than 8 inches⁴. Its diameter is that of the intestine from which it springs, or slightly less. It is present in 1 to 2% of all bodies, but a more practical measure of its frequency is supplied by the fact that in 10,600 operations at the Mayo Clinic from 1908 to 1911, it was met with 15 times.

Balfour⁵ states that in only 5 or 6 cases did it produce symptoms for which the patient sought relief.

"The anomaly may be complete and form a cylindrical tube opening at the umbilicus and into the intestine * * * * a fecal fistula. More commonly, however, only a portion remains and it persists as a free diverticulum which opens into the intestine. Examples are known of all stages between these extremes. Eisen-drath has seen a case in which the remnant had communication neither with the umbilicus nor with the intestine and had formed, through retaining its own secretion, a large cystic tumor. Granuloma, polyp and carcinoma of the navel have been known to originate in its remains, or to occur as a result of its persistence."

Disease of Meckel's diverticulum seems to be uncommon although the organ in some form is found in 1 or 2% of people. According to Griffith⁶ it may be the seat of the following conditions: strangulation of the intestine by the diverticulum or its remains; persistence of the diverticulum with an opening at the umbilicus; formation of a cystic tumor; concretions of varying sizes in the diverticulum; stenosis of the ileum by a short diverticulum attached to its distal extremity or elsewhere; invagination of the diverticulum liable to be followed by an ileocecal intussusception; volvulus of the diverticulum or of the ileum; hernia of the diverticulum; inflammation of the diverticulum.

Harbin⁷, in a report of 13 cases of Meckel's diverticulum, states that "In a series of 2624 abdominal operations in the clinic of the Harbin Hospital Meckel's diverticulum was noted 13 times. In 507 laparotomies where a routine search was made, diverticula of the ileum were noted 7 times, or 1.3%. It is accepted that the incidence of this abnormality in all human beings may be estimated at 2%."

As is well known, intussusception is the passing of one segment of intestine into another immediately contiguous. A synonym for intussusception is invagination.

Treves⁸ asserts that of all forms of intestinal obstruction at least $\frac{3}{8}$ of them are intussusception. Since this statement surgeons have profited by his excellent teaching to such

an extent that the diagnosis is more accurately and frequently made than formerly, and later authorities give it a relative frequency of $\frac{3}{4}$ of all cases of acute intestinal obstruction.

The length of the mesentery materially influences the degree or extent of invagination, and a careful investigation by Mr. Powers extending through a series of 44 cases, shows its proportion to the length of the body is relatively much greater in infants. This increased length allows increased range of movement to the intestines, and is perhaps a predisposing cause. If 50% of invagination occurs at the ileocecal juncture, it is reasonable to infer that the angle of union and the relative diameter of the ileum and colon have some bearing as predisposing causes. In isolated cases intestinal polypi may initiate intestinal invagination; so likewise irregularities of the bowel produced by strictures and neoplasms may lead to intussusception.

The important cause, however, of intussusception is unquestionably associated with perverted and irregular muscular action. It was formerly held that a normally contracted bowel was forced by peristaltic action into a paralyzed segment.⁹

According to Sajous¹⁰, "An intussusception is formed of 3 layers: the intussusciptiens, or outer receiving layer which, folding back upon itself, constitutes a middle or returning layer, and this again returning upon itself forms the innermost or entering layer or intussusceptum. Persisting diarrhea and polypus or lipoma or other benign pedunculated growths are the usual factors inviting this condition".

Much has been written regarding intussusception as the cause of intestinal obstruction, and the literature contains many cases of Meckel's diverticulum causing obstruction, by reason of congenital bands. After a careful and fairly extensive study of the literature, however, only 1 case can be found similar to the one at hand and that is the case of Mr. Rutherford Morison, referred to above, and quoted by Moynihan. Morison records a case of intussusception occurring in a boy, aged 5, in whom a tumor was felt in the left groin. At operation an incision was made and the invagination which was 6 in. long was withdrawn from the abdomen. The bowel was

steadily reduced by gentle traction from above and pressure from below and on reduction, a firm tumor about the size and shape of the little finger could be felt through the intestinal walls in the lumen of the bowel, fixed to the wall opposite to its mesenteric attachment. At the site of attachment a definite dimple was observed and this suggested that the tumor was an inverted Meckel's diverticulum which had formed the apex of the intussusception. A longitudinal incision 1 in. long was made in the intestine and the diverticulum, for this it turned out to be, was incised. The specimen showed an intestinal diverticulum turned completely inside out, measuring $1\frac{1}{2}$ in. in length, becoming wider from base to apex, and ending in a somewhat bulbous extremity. There were patches of gangrene in its wall affecting chiefly its mucous membrane. The patient recovered.

There is only one essential difference between this case and the one reported here and that is that the diverticulum in Morison's case was invaginated, while in this case it formed the base of the intussusception.

The patient, J. G., was a male, white child, aged 8 years, whose chief complaint was abdominal pain. Three days prior to admission he developed pain in the right lower quadrant. He slept well, however, that night, but the next day the pain became worse and he vomited. The pain was continuous, with acute paroxysms every few minutes. It was particularly severe the night before admission. Two enemas the day prior to admission were without results. There was no blood in the stools. Past history was entirely negative and there had been no previous trouble of this nature. The boy was well nourished and presented no apparent abnormalities.

Upon examination, his abdomen was found to be markedly distended, with marked muscle spasm over the entire abdomen but slightly more marked in the right lower quadrant. Temperature was 99.8° , pulse 140 and respirations 26. Urine report was as follows: clear amber, no sediment, acid reaction, specific gravity 1.011, 5 mg. per cent of albumin, no sugar, moderate amount of acetone, large amount of diacetic acid, and a large amount of indican. There were numerous hyaline and

fine granular casts, and 6 to 8 leukocytes per field. The leukocyte count was 5000, with polymorphonuclears 75%, small lymphs 18%, large lymphocytes 2%, and transitionals 5%.

Diagnosis of intestinal obstruction was made, and he was sent to the operating room immediately.

On operation there was a slight excess of serum in the abdomen. A mass of fair size was felt in the right iliac fossa which proved to be an intussusception of about 14 in. of the ileum into the cecum, carrying with it the appendix, which was entirely normal in every respect. It was possible by careful traction to release the entire intussusception, but when delivered a gangrenous Meckel's diverticulum was discovered; this was about the size of an average adult thumb and distinctly diseased. The laboratory reported that the "specimen consists of a Meckel's diverticulum which is acutely congested and the inner wall of which, on section, shows beginning gangrene".

The base of the diverticulum was about $\frac{3}{4}$ in. in diameter. This was closed in routine manner and the abdomen closed without drainage. The patient reacted splendidly from the anesthetic; there was no postoperative vomiting, the bowels moved well with enemas the second day following operation, and the patient was discharged apparently entirely well on the fourteenth day.

A letter from the child's parents written over 5 months after operation states in part that "Joseph has steadily improved since he left the hospital and it is not necessary to give him any medicine whatever. All his organs function perfectly and his system seems to keep in perfect condition". From which it is inferred that there has been no evidence of constipation or any other ill effects following operation.

This case was deemed of interest first, because there were 2 rare factors at work, one of which produces in this particular case the other, namely, Meckel's diverticulum as the cause of intussusception; and, second, because of the fact that, in a fairly exhaustive search of the literature, only 1 other such case report was encountered.

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Life—Death

BY GRACE NOLL CROWELL

I

And now that I have traveled many miles
 Down many a road—and many a crooked lane,
 And know Life is a thing of tears and smiles,
 Of peace—and white-winged joy—and bitter pain,
 Yet should some brother ask the way to go,
 I could not tell him—nor which road is best,
 I do not know his way—I only know
 That every road and every trail leads West.

No one can go the way that I have gone;
 I cannot go where other far trails run,
 Through light and shadow—Life has beckoned on
 Into the glory of the setting sun.
 The way I go—no other feet have trod,
 And no one walks the road with me but God.

II

Not knowing Life—how can I well know Death?
 Yet when he comes—I think that I shall be
 Tip-toe upon a shore—with' bated breath,
 Watching a broad gold path lead out to sea.
 The sun will gild the spires of the town—
 Clear bells will call the village folk to prayer,
 The sudden summer darkness will drop down,
 And I shall turn—and see Death standing there.

The shadows will be very deep that night,
 But O, I trust I shall not be afraid;
 Perhaps Death carries in his hand a light—
 These are the things for which I long have
 prayed—
 And looking in his face—that I shall see
 The one friend who had walked the road with me.

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NOTE.—The transaction of business will be expedited, and prompt attention secured if:

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

CONVENTION NUMBER

This issue of the Journal should be of special interest because it contains details of the Program for the Annual Meeting to be held in June, and because it presents advance information regarding matters to be dealt with then by the House of Delegates. The latter plan is new to our society and may not work out perfectly at this first try but it is a step in the right direction and experience will doubtless effect improvements.

The Program Committee is introducing the plan of holding special section meetings. Both section programs appear to be attractive. If the scheme works satisfactorily with reference to these specialties it can be extended next year to embrace others.

The general scientific program is unusually inviting; the topics chosen are of practical interest and the essayists are men of such standing and experience in their respective fields that we may rely upon their presenting papers of excellence. With 3 such meetings running coincidentally, one has a wide choice of subjects suitable to his taste.

The House of Delegates having been given a separate and entire day in which to dispose of the bulk of its work, members of that body will be free to attend the sessions devoted to scientific medicine without interruption, and, if one or more additional business sessions should become necessary it will be easy to utilize the late afternoon hours, after closure of the scientific programs.

The Woman's Auxiliary is especially provided for and it is hoped that every member attending will be accompanied by a member or potential member of his county society auxiliary.

A PROBLEM FOR CONSIDERATION

An excellent article—"Quality not Quantity"—in our department of Medical Ethics deserves the serious consideration of every thinking physician. Dr. Bradshaw has had the courage to face facts and to ask his professional confrères to do likewise. It is futile to continue the attitude of ignoring this matter. It is our duty to be leaders in the solution of all problems dealing with conservation of health and life and the development of a better race of men. In the matter of birth control, and of eugenics generally, we are little better now than camp followers. Intelligent laymen have expressed themselves and are acting upon their conclusions. The uneducated mass is floundering in its ignorance. The partially informed are demonstrating the familiar theorem that "a little knowledge is a dangerous thing". Contraceptive measures are being "bootlegged" more or less openly. Young men and young women are frequently berated for precocity, when they should be commended for showing more sense than did their forbears in the prevention of disease and possibly worse calamities. Otherwise honest physicians are compelled to violate a law the observance of which would cause them to sacrifice the happiness, health or even lives of patients who repose in them a trust. Possessed of knowledge that might be helpful in solving some of the most important of our state and national problems, is it fair and honest that we shall continue to stand aloof from the discussion and submit supinely to absurd legal restrictions?

Think it over! And, while thinking, read "Why We Behave Like Human Beings" and "The Next Age of Man".

In Memoriam

MARSHALL, Dr. Randolph, who died on April 1, 1928, at Tuckahoe, New Jersey, was one of the pioneer physicians of Cape May County. He was the son of Dr. Randolph Marshall and each had occupied prominent positions in the community in which they lived. Born in 1854, graduated from the Jefferson Medical College in Philadelphia in 1877, his busy professional life extended over a period of more than 50 years. A little more than a year ago, his fellow-practitioners gave him a Testimonial Dinner in honor of his completion of 50 years of practice. At that time he seemed to be in good health and spirits and it looked as if he might have still before him many added years of useful activity. The end came, however, rather suddenly and unexpectedly, with a rapidly developing pneumonia as the cause of his death.

Dr. Marshall may truly be said to have been the Nestor of the medical profession in Cape May County, and like Nestor of old, he had lived through 3 generations. He belonged to a type of medical practitioner rarely seen today—the old time country doctor, as he was called, who, as long as he lived, had the loyal devotion of his patients and was mourned by them after he was dead as a friend who could not be replaced. The country doctor of that day was a general practitioner in the real and widest sense of the word. He was his own diagnostician, pathologist, dentist, surgeon, pharmacist and obstetrician. Unlike some of his modern confrères, who seem unable to find a firm foothold in the therapeutic quagmire of latter day medicine, not a little of which seems to consist in introducing into the human body substances of which little to effect changes of which less is known, he continued to have an abiding faith in the efficacy of drugs—not many in number perhaps, but which, carefully tried out in practice, were, in his hands, real instruments of precision; with the use of which he was thoroughly familiar and which did him yeoman service in battling with disease and death. With no laboratory adjuncts or other aids to practice as it exists today and with practically no diagnostic aids, until within the last few years, at least, except his thermometer and stethoscope, he fought disease successfully, and death found him no mean antagonist; for he watched his patient from a background of a rich, long and varied experience, coupled with which was an intimate personal knowledge of the patient himself and not infrequently of his family through 2 and possibly 3 generations and it is not to be doubted, that, in strictly medical cases, he achieved results which would compare favorably with those of scientific medical treatment of today.

In addition to his strictly professional work, Dr. Marshall had many and varied outside interests. He took an active part in civic and public affairs and, in all matters where the public welfare was concerned, he gave freely of his time and energies. He was a Director of the Ocean City National Bank and had attended a meeting of the Directors of that body only 36 hours before his death. He had been a life long member of Tuckahoe M. E. Church and was always ready to support it by his presence and his contributions. As a man, he was exemplary, earnest, thoughtful, courageous and true; as a friend, loyal, steadfast and unswerving; and the gratitude and grateful appreciation of his fellow citizens, patients, and friends, not withheld during life, will continue to follow him far beyond the present and down the years to come, even to the confines of that other and better world to which, as we may all confidently hope and believe, he has gone. "Multis ille bonis flebilis occidit." May he rest in peace.

JOHN H. MOORE, M.D.,

Bridgeton, N. J

Medical Ethics

QUALITY NOT QUANTITY

John Hammond Bradshaw, M.D., F.A.C.S.,
Orange, N. J.

In the first place, we must purge our minds from the unclean conception of sex. It would also be a blessing if we could forget the words "Birth Control". To the average mind this means abortion. Nothing could be farther from the truth. Unless there is fecundation there is no abortion possible, and it is the restricted limitation of the fecundation of the ovum that the advocates of this subject intend. It is not an immoral or disgusting topic unless our minds have such a slant that we make it such. A noted clergyman much respected by all thinking and Christian people says the time has arrived when those who desire welfare of the race (in all pure-mindedness) can put the subject on a hygienic and biologic foundation and give it sincere sanction. The status of the doctor on this question should be definite and outspoken. He should make it a study. One cannot otherwise evaluate a procedure. Those who consider even the discussion of such a biologic subject a violation of divine ordinance have already sealed their minds.

When a writer says that the Church opposes birth control because of her need of a lot of morons, I affirm such a statement is pure rot. Official inertia we shall always have with us. Personal inertia is inexcusable and is a bar to progress. There will always be men, thank God, whose mental processes are more active than the thinking ability of the masses. It is because these men are what we call "ahead of their times" that they have been and are still, figuratively speaking, burned at the stake. Possibly a century or two later we dig them up, forget their ignominious graves; they are now canonized and become our saints. "Wilful obscurantism is less excusable than ignorance."

In order to further open-mindedness, a Forum on Birth Control has recently been running in *The Medical Journal and Record*, (New York). There is no question that the hundred or more doctors who have therein expressed their opinions have a right to be heard. You need not agree with them in what they say, but there is no hesitancy in the statement that your gorge will arise when you learn that here in our State of New Jersey a doctor who imparts knowledge on the subject of Birth Control, or who even is found to have in his

possession a device for such object, faces a term in jail. This is the law!

The law has imposed many sad restrictions on doctors. It insultingly often imposes restrictions that if the doctors would only stand up, shoulder to shoulder, and oppose, they could easily remove. "The fault, dear Brutus, is not in our stars, but in ourselves, that we are underlings."

There are a few facts that we should remember. Do we wish to emulate Nature's blind forces, Nature's thoughtless procreation of undesirable bacterial, insect or animal life? One of the highest tributes to the medical profession is the statement that preventive medicine is occupying so much of their thought, strength and money at the present day. What preventive medicine costs the doctor in yearly revenue it is impossible to compute. We all know what happens in Nature when bad germ life is not controlled. Is there another law for man? "The greatest of all achievements, the most divine gift which God has bestowed upon man is conscious procreation." Let it therefore be conscious, not unconscious, thereby being not immoral but conscientious.

Ask the social worker about the miseries and immorality of the living conditions positively produced by excess of children; the ill-health of the mother; the unbelievable wretchedness and moral degradation. How about this deluge striking a father possibly with a natural inferiority complex at best? Are not his ideals in danger of being wrecked? Poverty, despair, depression are poor bed-fellows and give place to drink, envy of the "upper crust", the open ear to calamity howlers, bad socialistic doctrines, crime, anarchy, and possibly ending in the mad-house, the penitentiary or the electric chair.

"Our population today has been doubling itself on an average once in less than 25 years." Is this not food for thought? The excessive birth rates of humans in India and China are directly responsible for the frequent famines and accompanying plagues. Can the thinking mind compute the misery? "The barbaric birth rate of Germany made the world war possible." Pressure of population develops brutality, selfishness and disregard for human life. It crushes generosity, impedes the true evaluation of high ideals.

The highly regarded aim of the progressive breeder of our pedigreed animal life is to impede the production of bad stock and to favor the production of good stock. This meets the approval of the whole country—as it should. Millions are spent by our national government to encourage and activate this prin-

principle among our farmers. Now just why the lower animal life of the country should be regarded as more important than the highest is a problem in eugenics!

In the United States, 300,000 children under one year of age die every 12 months. Do we not know that poverty and malnutrition are the chief causes of these deaths? Is not the death rate as important as the birth rate? How about the offspring of the feeble-minded? The offspring of one feeble-minded man cost the public \$1,300,000 in the course of 75 years.

Under the present law the largest number of abortions in the United States are performed upon married women, and America stands at the head of all nations in this respect. (Sanger) Contraception or abortion—which shall it be?

Now just what constitutes contraception? Is it wrong to nurse a baby beyond the proper time? We all acknowledge this is birth control and call it *natural*, but do we remember that this injures both mother and child? Contraception is practiced by the "intellectuals". Is there any question about that? There is no use of our being hypocrites in the matter. Then why not permit the doctor to teach the poor ignorant mother, information she can get clandestinely at the drug-store, the mother who physically and economically is in no position to bear 8, 10 or more children? But recently, in a medical society, a doctor who spoke in favor of this question was plainly told he would land in hell!

We are obliged to admit that moral standards are conventional. A well-known Philadelphia physician writes that "the teaching of contraceptive methods for control of the population is to my mind the highest type of morality since, according to Webster, morality is 'the doctrine of human duty'. It is the duty of every parent to give his offspring the best possible advantages to prepare them for the struggle for livelihood, and to do this it is absolutely essential to control the size of the family."

Dr. James Lincoln McCartney, of Washington, writes: "Mankind is only on the outside of discovering the wonderful value of the reactions obtained from sex relations apart from reproduction. Physically, psychologically, emotionally, and spiritually these reactions can be a far-reaching stimulus for all that is best and most inspiring in human life, but just so long as human laws besmirch the whole subject, just so long will the race be shackled in its upward struggle."

The Dean of St. Paul's (London) writes: "It does not seem to me that we have come upon anything that calls for moral censure

except that the public is culpably blind to the disastrous results of a social order which encourages multiplication of the most undesirable section of the population—the people of the slums—while it penalizes and slowly eliminates the intellectual élite who in this country are also as a class far above the average in physique."

Furthermore, in the interest of the child itself, contraceptives, to space births, are of great value in *reducing infant mortality*.

(This article was submitted to the distinguished attorney, Mr. Edward M. Colie, with a request for exact information concerning the law, and he replied: "You are right on the law. It actually shuts the mouth of the doctor as to anything whatever that is *practical* on the subject.")

Esthetics

THE PLAY'S THE THING

Though we have repeatedly recommended methods of diversion and means of recreation for the tired physician, and urged that some measures be regularly employed to prevent that tired or stale condition that follows upon overwork or even the too steady application to a single line of work, we have not in this Department previously discussed the benefits to be derived from the theater. How we happen to have passed over that question is not easy to explain, for we are rather fond of an evening at the show and range over the entire stage field from grand opera to the Punch and Judy performance in a sidewalk booth. Perhaps we felt some hesitancy to speak lest we betray the low average of our preferences in the entertainment line. However that may be, the present is an opportune time to direct the attention of physicians to the stage, because there happen to be on the boards just now a number of plays from which we may derive both recreation and instruction. It is indeed surprising how many of the modern plays present the physician prominently in the cast and it will be edifying to see one's self as the playwright sees him. We may pass over the recent revival of the "Doctor's Dilemma", for unless you have a much higher regard than has the Editor for the author of that play, you will not wish to waste any time on the play or anything else that he has written.

Passing through the Times Square subway station one evening recently, our attention was

attracted to 3 theatrical advertisements displayed side by side: "The Bachelor Father", "Interference", and "The Unborn Child". The last mentioned is advertised in the daily papers as an "ultramodern play—the truth about birth control". "Interference" is described by Benchley as consisting of "dirty work with poison". "The Bachelor Father", with the always captivating June Walker playing the rôle of heroine, is a pleasant mixture of comedy and drama resulting from the whim of an aged bachelor to gather into his desolate home the 3 illegitimate children begotten in his wild-oats days.

More interesting than any of these, perhaps, and at least presenting questions for deeper thought, are 2 new plays of different type—"Diversion" and "The Strange Interlude". In the first named, an eminent English surgeon is confronted with the problem of saving from the gallows his youngest son, the pride and joy of his life. An older son and a daughter have not meant so much in the life of the father; in part because of love concentrated upon the child for which the wife and mother laid down her life. Just before completing his professional studies, this favorite son, while on vacation in Italy, falls desperately in love with one of the vicious specimens of "women of the world", an actress who has been rather promiscuous with her affections and who finally tells the boy that he is too infantile to play her game properly. In a fit of disgust at having been duped, he chokes her to death. He had not intended to kill, and makes no effort whatever to conceal the crime. In a stupefied state, he returns direct to his home and tells his father the details and the certainty of detection and punishment. Sudden inspiration leads him to suggest that inasmuch as execution is bound to be his fate, immediate suicide by poison will save the family to some extent from publicity and scandal, and he demands that the father supply him with the necessary poison. That particular moment in the play presents an interesting study for any physician. Is the physician-father justified in presenting the son with a lethal dose that will save him from the certain agony of jail, trial and execution as a criminal, and, incidentally, spare the family, in so far as possible, from all the attendant ignominy? We would encourage you to see this play, to "put yourself in his place", the physician and father, and consider what you would do under the circumstances. As originally presented, the father supplies the son with the required poison. We are informed that the public demand that all plays shall have a happy ending has forced a change in the procedure and that as presented at pres-

ent the suicide is prevented by a last minute message stating that the girl had miraculously recovered from the choking which the youth supposed to have been fatal; an ending which is tame and not "true to life" but which nevertheless leaves the physician's question still open for consideration.

Of even greater significance, because it marks a great advance in the presentation of dramatic action, is "The Strange Interlude". It has been well called the "third dimensional play" and Eugene O'Neill has succeeded, to a very large measure, if not perfectly, in accomplishing what has been heretofore considered practically impossible. The play is the most striking lesson in psychology that the stage has given us. By clever manipulation of general conversation, the expression of the "stream of thought" while all other action is suspended, each player is made to reveal what he is thinking at the same time that he is acting and speaking; the spoken thought being frequently quite at variance with the mental commentary. We have not the space, nor the ability, to properly describe this play here. See it for yourself, if for no better reason than that it is the year's outstanding theatrical contribution.

There are many other interesting plays appearing just now, mostly of lighter weight, musical comedies and girlie shows, that will serve the purpose of providing mental relaxation but, even if the above mentioned plays do require the brain to continue on the job, a change from use of the routinely employed cells to others that may not have been over-exercised for some time will do you as much good; and you may acquire the habit of taking an occasional evening off to enjoy the play.

Special Article

TESTIMONIAL DINNER

tendered to

Thomas W. Harvey, M.D.,

In recognition of 50 years of service as a practicing physician and a practical citizen.

On the evening of March 9, 1928, more than 200 friends and fellow practitioners of medicine sat down to a banquet at the Hotel Suburban, East Orange, to pay tribute of respect to Thomas W. Harvey, dean of the medical profession of the Oranges. The occasion for this celebration was his completion

of 50 years service in the practice of medicine.

Dr. Richard D. Freeman, of South Orange, was Toastmaster and, besides introducing the several speakers, made the presentation speeches when, on behalf of those subscribing to the testimonial, a radio receiving set was given to the guest of honor, and when, at the request of the Graduate Nurses of the Memorial Hospital School of Nursing, and of the Central Registry of Nurses, he delivered to Dr. Harvey a handsome desk set and a signet ring.

At the close of the dinner, Mrs. Harvey, accompanied by several women friends, put in an appearance and was presented with a large bouquet of roses tied with Princeton University colors.

Among those present were:

DOCTORS

Adams, J. K.
 Allen, J. S.
 Allen, Wm.
 Alexander, W. G.
 Beling, C. C.
 Barry, A. S.
 Blakely, E. W.
 Bradshaw, J. H.
 Brown, R. T.
 Buvinger, C. W.
 Bingham, A. W.
 Benedict, A. C.
 Barkham, H. C.
 Blum, Karl
 Blanchard, K.
 Clark, J. H.
 Carman, Fletcher
 Cline, B. F.
 Colsh, L. L.
 Crankshaw, C. W.
 Chamberlain, A. R.
 Connelly, R. N.
 Corwin, T. W.
 Conaway, W. P.
 Cater, D. A.
 Cox, J. C.
 Danzis, Max
 Demarest
 Donahoe, L. F.
 Dickinson, G. K.
 Dane, Chas.
 Dane, John
 Dodge, Walter
 Emerson, Linn
 Eagleton, W. P.
 Ewing, H. M.
 Ferris, S. W.
 Freeman, R. D.
 Furman, B. A.
 Glass, W. H.
 Gifford, W. R.
 Gray, J. W.
 Gregorius, R. F.
 Hagerty, J. F.
 Harris, H. B.
 Hughes, L. W.
 Hanan, J. T.
 Hawks, E. Z.
 Harvey, T. W., Jr.
 Harvey, T. W., Sr.
 Ill, C. L.
 Ill, E. A.
 Ill, E. J.
 Kalter, G. E.

Levy, J.
 Lane, A. W.
 Lane, F. B.
 Lawrence
 Lee, S. G.
 Livingston, P.
 Lockwood, F. W.
 Luongo, F.
 Martinetti, C. D.
 Minnard, E. L.
 Murray, E. W.
 Matthews, H. E.
 Martland, H. S.
 Morrison, J. B.
 Moulton, C. D.
 Mount, W. B.
 Muta, S. A.
 McBride, A. F.
 McCroskery, J. H.
 McMurtrie, W. A.
 Neare, C. R.
 Norris, Henry
 Olcott, G. P., Jr.
 Orton, H. B.
 Parker, J. E.
 Payne, Guy
 Phillhower, G. B.
 Pinneo, F. W.
 Prout, T. P.
 Pannell, W. L.
 Pendexter, S. E.
 Pyle, W.
 Peabody, C. M.
 Ranson, B. B., Jr.
 Reitter, G. S.
 Russman, E.
 Rogers, E. H.
 Reik, Henry
 Runyon, M.
 Sprague, E. W.
 Seibert, E. C.
 Staehlin, E.
 Schaufliker, W. G.
 Sherman, E.
 Seranton, C. W.
 Simmons, A. V.
 Synnott, M. J.
 Straub, H. H.
 Taylor, G. H.
 Tenney, A. S.
 Thayer, W. H.
 Tymeson, W. R.
 Thompson, A. F.
 Verbeck, G. B.
 von Hofe, F. H.
 Lundblad, W. E.

SPEECH OF DR. WALT P. CONAWAY President of the Medical Society of New Jersey

It is indeed a very happy privilege to be invited to share in this splendid tribute, this "feast of reason and flow of soul" you are giving Dr. Harvey tonight. It is a just recognition of the highest appreciation from the members of his profession. I have been honored with his friendship for about 25 years and I am very proud to join in this ante-mortem testimonial of appreciation and good will. An occasion like this must be in itself a great honor to him, and to have the "well done" from such a group of his professional brethren must be a source of great satisfaction. It seems to have been the good fortune of our honored guest of the evening to have realized

Wherry, E. G.
 Wendel, A. V.
 Whitehorn, H. B.
 Wakeley, W. E.
 Wallhauser, H. J.
 Warner, W. H. A.
 Weiss, Louis
 Zehnder, A. C.

MINISTERS

Boyle, W. R. W.
 Francisco, W.
 Walkley, Chas. T.

LAYMEN

Ashley, E. W.
 Bowers, Ogden
 Britton, W.
 Britton, A.
 Chubb, Hendon
 Cordley, H. G.
 Colie, Edward
 Everitt, J. D.
 Egner, Fred.
 Freeman, Chas.
 Gerhard, Chas.
 Green, E.
 Grymest, A. J.
 Howe, F. Stanley
 Harvey, S.
 Hiseox, G. D.
 Halsey, W. G.
 Lee, Sam.
 Lord, William
 Meade, C. R.
 Mitchell, W.
 Potter, C. H.
 Prizer, Edward
 Pitney, H. C., Jr.
 Roche, A.
 Richmond, A. W.
 Ten Eyck, J. C.
 Williams, T. W.
 Wiley, W. O.
 Winter, Arthur
 Winter, Fred.
 Winter, H. F.
 Winter, Irma
 Wallis, N.
 Zimmerman, A.
 Zimmerman, F. J.

the words of wisdom spoken by Polonius to Laertes:

“The friends thou hast and their adoption tried,
Grapple them to thy soul with hooks of steel.”

I have always admired Dr. Harvey for his sterling character, his great influence for good and his many attainments. At all times modest, unselfish and unassuming, he has devoted half a century to all that is best in medicine. An Ex-President, a benefactor to the Medical Society of New Jersey, his intense interest in

puts his profession on a high plane, but he puts the world higher. If we would not die at the top, we must not surrender to the sordidness and discontent of old age, but, forgetful of self, we must cultivate interests, and so, like our friend, we may gladden the world, and even though we shall become “the last leaf on the tree”, having survived the winter’s blast to the second spring, we may be, not seared with yellow, but still green and filled with the fire and enthusiasm of youth.

For myself, and the others who will not have an opportunity to express their thoughts tonight, let me say that we congratulate ourselves on the privilege of being here and desire



THOMAS W. HARVEY, M.D.

improving the usefulness of medical societies, his liberal-mindedness, his unflinching loyalty, and his genial nature have endeared him to all of his friends. His outstanding influence in stimulating the highest professional and personal ideals has been an inspiration to all of us. It seems to me particularly fitting at this time to quote the words spoken by Dr. Emmett, similar to those of Dr. Addison: “Men, like trees, may die at the top, but not so our friend”. Having laid aside the labors of surgery, he has become the scholar and the man of affairs, and broad enough to look beyond the narrow confines of his calling, to appreciate the relations of things to the outside, he

to felicitate Dr. Harvey and to bestow upon him our warmest admiration and affection. Would time permit, I would gladly dwell longer upon the sterling qualities of head and heart which he has always exhibited in dealing with his fellow men. I hope you will realize, as I do now, that all of us have honored ourselves by coming here tonight for we have lifted up and exalted one of our number whose life is an embodiment of that sublimest principle of earthly life—Truth. May we long have the pleasure of his friendship and the privilege of his kindly counsel, and may the remaining years of his life be filled with peace and contentment and happiness.

SPEECH OF DR. MAX DANZIS

President of the Essex County Medical Society

I consider it a great pleasure to be able to be here this evening to represent the Essex County Medical Society at this testimonial to Dr. Harvey.

I want to express to him our appreciation of the work he has done for the Society.

I am familiar with his efforts in behalf of the medical administration and I can testify to the wonderful work he has done.

I consider this a great privilege to be here and I offer the appreciation and congratulations of the Society this evening.

SPEECH OF REV. CHARLES T. WALKLEY

It has been a great pleasure to know and be associated with Dr. Harvey. I have been to the hospital a number of times and I must say that I have grown to admire and appreciate him more each time I have met him. As I look at all of you here tonight I can easily see that his work has not been done without the appreciation of his co-workers.

I think one of God's greatest gifts to men is the "physician" and I want to take you back long before the religious times, to Sirach, where he said, "Honor a physician with the honor due unto him for the uses which ye may have of him: for the Lord hath created him. For of the most High cometh healing and he shall receive honor of the King. The skill of the Physician shall lift up his head, and in the sight of men he shall be had in admiration." This is what is said by the Son of Sirach in Ecclesiasticus, of the Physician. For more than 200 years this has been the opinion men have had of physicians. They were connected closely with the Creator of all things. I am sure that this feeling of blessing that lies underneath these words is with us tonight.

The professions meet human needs. The ministry, the lawyer, teaching, medicine. The lawyer settles contentions of minds and contentions of the world. The teacher satisfies longings of the mind. The physician touches every point and comforts and heals the body by wonderful operations. This great profession has contributed much in the last half century. Think of the changes which have been wrought since Dr. Harvey was born. We have seen part of this revolution in our own times. The world of medicine has been recreated. Think what benefits have come to mankind in this country alone. Mankind lives on the average to the number of 56 years. With such progress in the next 30 years as we have had in the past 15 or 20, man's average age will be 70; all through the instrumentality of the doc-

tors' profession. Think of the discoveries which have been made in your profession; microbes—all these little bugs—tuberculosis, yellow fever—these all remain bound up in your medical profession. You have contributed to the world's material progress. The Panama Canal could not have been completed without the medical profession. There could not have been the great interchange of a nation's goods as there is today. We have known for the past 10 or 15 years how the medical profession discovered that the bubonic plague started in Tibet, moved out in ships to India, swooped down upon other nations and destroyed people with death. Your profession, so marvelous has it been that never again can a plague swoop over the world as it has in the past.

You know that formerly men used their hands without any care whatever in operations, within this generation. No longer are such slipshod methods used, and the mathematic certainty of surgery has become so great that it does not seem possible that the old methods could ever have been used. I say that this has been a wonderful contribution to the mass of people and that you have also viewed with pride the rise of the "specialist". I have always admired the family physician but I wonder what would happen today, when he comes to a certain point and feels himself uncertain, if he could not call in the specialist. This specialist by his learning can say the word that saves and I think the rise of specialists will be one of great rapidity. They have added and will continue to add much to the history of your profession and I doubt whether the ordinary family could get along very far without the specialist.

Florence Nightingale took surgical nursing out of the hands of red tape and incompetence and saved hundreds of lives, and through devotion and scientific understanding brought operations up to a higher standard. And too, the Orange Memorial nursing staff has made contribution in the way of competency to this community. Everyone knows the advance there has been in this hospital; especially when we think of what the building was 25 years ago.

There has been a great change in patients as well. Your profession has implanted in the public a feeling of confidence and has eliminated fear, and by these efforts has extended the length of human life in this country beyond that of all others. The average length of human life in England is from 46 to 50, in Germany 47 to 48 and in America 56 years. The reason for this lies in the fact that we have had a great body of men who have been intelligent. You now have coöperation that

did not exist 25 or 30 years ago. We have a feeling of public security in the matter of health. I think there has also been a distinct increase in the use of psychology. In the past 10 years, psychology has been absolutely established and the man who does not use it in his profession is missing one of the great arms of modern knowledge.

We travelled around the world several years ago. We could go absolutely free through China, Japan, India without a moment of fear. Free to go because we were prepared to go. This was not possible 25 years ago. An army can now travel thousands of miles, as our army did 10 years ago, because you have given them such freedom as the world has never known before—physical freedom. Better knowledge of medicine exists today. Figures on a slip of paper cure things and do not arouse suspicion. People know that your knowledge is being transmitted in shorthand to be made up by a competent druggist. People have lost fear. Religion and medicine have always been bound very closely, as is shown in the ninety-first Psalm: "Thou shalt not be afraid for the terror by night nor for the arrow that flieth by day; nor for the pestilence that walketh in darkness; nor for the destruction that wasteth at noonday." This Psalm shows there must be belief in God and not in superstition. Let us come down into modern times where we have had men like Drs. Osler, Cabot, S. Weir Mitchell and Howard Kelly. These men have made wonderful contributions to humanity, by individual and collective offerings toward reconstruction. These men give us better than body health, they give us high ideals.

Mother India. How many men here tonight have read this wonderful book? I see that a majority of you have. Every man should read this book. Gathered from the statistics of medical societies it shows us how much farther this country has gone beyond India. These 50 years have been remarkable, but who knows what the next 50 will bring?

A "medicine man" is more than a man of medicine, he is a priest, a prophet and a soldier. Dr. Harvey has been 50 years in our community. A priest, prophet and soldier, trusted, because he has enjoyed the confidence of thousands of men and women. He has given them not only health but he has pronounced upon them an absolution, and I doubt if any of us can tell what this man of God has done in conferring blessings as a priest of medicine, upon those who came to him in trouble. Dr. Harvey has drawn men of different opinions together and has held them by his own powerful knowledge. He has been a

great fighter for good; not content to take things as they came but has changed them as they ought to be and has made positive contributions to our community. I rejoice in the contributions he has made by his life of devotion, by his assistance to men and women and children with whom he has come in contact. This question comes to me: "Simon Peter, lovest thou Me?" Our hearts answer, "Surely we love you". Our contribution this night is that we love and respect you and ask God's further blessing on you in years to come.

SPEECH OF MR. HENDON CHUBB

President of the Welfare Federation

Rising to make my address I have a thought I would not have before any other audience, made up of medical men. As I stand here I shall do with great pleasure the little I can to make a tribute to Dr. Harvey. I am not very much at after-dinner speaking and so a little cloud rises on your horizon; it obscures anticipations of the evening and makes it somewhat different. Like the man who rushed into the Judge's room one day and excitedly gasped to the Judge, "I just killed Jim Smith". "That's all right", answered the Judge, "Why disturb me? Bounty is paid at the County Clerk's office."

It is a very real pleasure tonight to speak and pay some tribute to such a man and to such a noble profession. The "general practitioner" is the backbone of the medical profession. He has not the skill of the specialist but he has the finest qualities a man can have. He serves. The general public pays, with its love of the spectacular, homage to the specialist but overlooks the wonderful achievements of the general practitioner, which are being done every day, day in and day out. I heard a specialist described as a man who knows more and more about less and less. I do not think this is any reflection upon the specialist. Indeed he is a man who contributes more and more to the medical profession as time passes. Up to the present time no emphasis has been put on early diagnosis, but now an early diagnosis has often saved human life. In the old days a specialist came upon barred doors. Today the specialist has an open pathway. He gives man his chance for life. One day down South a man was sitting on his porch with his dog lying on the ground near him howling. The new village doctor came along in his carriage and stopped to see what the matter was. He asked the man sitting on the porch what the matter was with the dog. Did he have hook worms? The man answered, "No, he

hasn't got hookworms, he's sitting on a burr and he's too lazy to get up".

During 50 years Dr. Harvey has seen progress and adjustment as well. He has added year by year to his store of knowledge and gathered in the fruits of other's labors. He has studied everything with open mind and without conceit, always ready to learn, ready to take advantage of the learning of others. He has occupied an enviable place in this community. He forms his judgments after looking at all the evidence; then holds to his judgments firmly. I know of no one who forms his convictions more deliberately than Dr. Harvey and no one who sticks to them more firmly. He represents the highest type of physician in this community. We all know the definition of the "general practitioner" in Dr. Osler's book, and that book gives a definition of our guest of honor that I cannot add to. I recognize that it may be inadequate for the work he has done, but I assure you it comes from the depths of sincerity, and it must add some value to the poor world. Look at Dr. Harvey from a three-fold background. First, officer of the Orange Memorial Hospital; second, officer of the Welfare Federation, devoted, a hard worker and skillful; and third, I speak from the personal background, as one who has pinned his hopes on the skill of this man. My heart was made glad by the skill of him and I was bolstered up by his sympathy. I am thankful for this opportunity to bear public testimony to his greatness.

RESPONSE OF DR. HARVEY

I do not believe I can find words to show what is in my heart. I have not words with which to express my feelings and emotions under the circumstances, and in the presence of these friends who have come here tonight to offer their congratulations. To those kindly souls who planned this evening and to those that have responded so wonderfully I can only return my sincere thanks, and tell you in broken and imperfect speech how much it means to me. This is a wonderful culmination of a long journey. I value most highly the interest that these two old medical societies have shown in making this dinner a success and, to these old friends who have come here tonight, I can offer my warmest welcome. When I look you over and remember what each of you mean to me, how many stormy times we have weathered together, it leaves me weak under the lids of my eyes.

When I ask you why you should take all of this trouble, I recall the explanation of the genial autocrat, "folks want their doctors

mouldy like their cheese". I told Dr. Freeman it is dangerous to let me reminisce.

I will ask you to turn back those 50 years and let me tell you about the condition of affairs at that time in Orange and in medicine. The year 1878 saw a great change. The old order began to recede and the new order "public health", "sanitation" and the "newer medicine" began to take its place. It was the seed time of the wonderful developments of today. When we look back and see the wonderful things that were generating in the womb of time 50 years ago, we can picture to ourselves the real thrills that accompanied those early inventions and discoveries. Pasteur before the Academy of Paris opening the jar which contained organic matter free from germs. There is no life without a germ. That was the basic foundation of the germ theory of disease which has been the theory for the past 40 or 50 years on which doctors based all learning. Think of Lister uncovering his first dressing of an infected compound fracture and finding the wound clean; think of Edison turning the switch that made his first electric-light lamp glow with light; think of Roentgen developing that plate in his dark room, the negative that had been exposed to an electrified Crookes' tube and seeing the shadows appearing one by one that meant to his trained mind a revolution in our knowledge of light—but even he could not have foreseen the present slate of our knowledge of the effect of radiant energy. Think of Watson hearing the voice of Bell coming through the wire from another room. This was the basic foundation of intercommunication so our telephone and radio can be heard all over the world.

All these things had their fateful beginnings in those early years. In 1878, the Oranges were very different from what they are now; dirt roads, wooden sidewalks, few gutters or cross walks, oil or gas street lights, no telephones, horse-cars, no water, no sewerage. The population of the Oranges was about 15,000. Harrison Street was just beginning to emerge from the farming district. You knew everyone and their affairs.

I was very early brought in contact with an interesting group of engineers in East Orange whose avocation was Public Health and Sanitation. They were Col. Waring, afterward Street Commissioner of New York City; Prof. Rossiter Raymond, of Columbia, a wonderful man, a second Osler; James C. Baylis, later President of the New York Board of Health; A. P. Boller, a noted bridge engineer; and Col. Olcott, father of Dr. Olcott. These men devoted much study to the health prob-

lem of the Oranges. The New England Society also lent its aid and as a consequence the Citizens' Health Association was established to improve the situation. The agitation for sewerage and drainage and water supply went on for several years and then the politicians took over the work of these men who had laid the foundations. After this year, 1878, things began to move more rapidly. The telephone was introduced in 1879; the New England Society built the Music Hall, our first theatre, in 1880. Edison announced that electric lighting was an assured success about the same time.

The reputation of the Oranges as a Health resort, particularly for respiratory diseases, and improved railroad facilities stimulated a very rapid growth of population, as they have grown ever since.

In 1882 three great events happened. The first one, I got married. I thought so then and I think so now, after 45 years. I never would have had that part of my life different. A doctor's wife holds in her hands the power to make or break him. He is a lonely bird socially and it is most important for him to know that there is a home for him to go to where his worries and his weariness may find sympathetic attention, and that is what the old home at Main and Hillyer has meant to me.

The second was the building of the new hospital with the new training school for nurses, the first in New Jersey; and the establishment of the Record ambulance. The new hospital buildings consisted of the administration and the old medical ward building and cost about \$30,000. The staff was reorganized and consisted of Drs. Pierson, Wickes, Chandler, Thompson, Stickler, Holmes, Buttner and Harvey. There we were at the beginning of the new movement in surgery. Under the leadership of Dr. Pierson we commenced at the very A B C of the Lister movement and worked, step by step, all lending a hand, eager for each advance. The result of the 50 years of our work was to standardize the progress that had been made so that today the merest tyro does not hesitate to do things that 50 years ago required a consultation of the entire staff. This development of the new antiseptic surgery into the aseptic surgery was going on contemporaneously in all our medical centers. Ill and his disciples in Newark; Abbe, McBurney and Bull and their disciples in New York; and wherever there were live men the new development was going on.

The third point was the founding of the Orange Mountain Medical Society. This old society has given us veterans the finest kind of postgraduate training, in fact for many

years it was all that we could get. The third paper read before it was entitled "Antiseptic Surgery", and in it the new principles as taught by Lister were described and as new practice and new operations were suggested we had early news of these at our meetings. The battle of the causes of tuberculosis and demonstrations of new procedures such as incubation made our meetings interesting and instructive.

I see that Cabot has recently said that the day of the general practitioner and the old family physician is over. The same was said 40 years ago. It has only been the last 5 years that have really rung out his death knell.

If we are to say vale to the old family physician as he steps with Hiawatha into his canoe and faces the setting sun, let us recall that it was he who laid the foundation of this wonderful structure that we know as modern medicine and we will think of him in the words of Holmes—

"How blest is he who knows no meaner strife
Than Art's long battle with the foes of life;
No doubts assail him, doing still his best
And trusting kindly Nature for the rest".

This overcomes me, a little old doctor, and all I can say is—I thank you from the bottom of my heart.

Case Report

SUSTAINED CREATINEMIA IN A CHILD

Robert A. Kilduffe, A.M., M.D.,

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Atlantic City, N. J.

Because of its extreme solubility and the ease with which it is removed from the blood by the kidneys, the retention of creatinin occurs practically only in the presence of renal impairment of the degree of which it forms, under definite circumstances, a fairly reliable index. As a rule, retention of creatinin does not occur until the functional efficiency of the kidney has been markedly impaired and, with the exception of anuria in which the cause can be removed, and acute nephritis in which temporary high values may be found, well marked creatinemia forms a reliable prognostic omen of ominous import.

Following the observations of Myers, crea-

tinin values of over 5 mgm. per cent were regarded, for some time, as denoting an early fatal termination, and while there are occasional exceptions to this general rule, creatinemia of any marked degree does not frequently persist over any great length of time. The present case report is an instance of persistent creatinemia in a child, and illustrates not only the prognostic value of this finding but also the fact that the degree of creatinemia cannot always be relied upon as an indication of an early fatal termination.

M. A., colored female aged 7 years, was admitted to the service of Dr. W. B. Stewart, through whose courtesy the case is available for report, April 23, 1927, and the following summary is from the notes recorded by Dr. Stewart:

The mother has a strongly positive (Kolmer) Wassermann. The child is of normal height and weight. Between the ages of 2 and 7 months she was treated by a Florida physician by inunctions and "drops" for "a large liver, anemia, and vomiting", suggesting that his diagnosis was congenital syphilis. She had measles at 4 years of age, pertussis when 5, occasional earache, and "frequent attacks" of tonsillitis. During the past year or so there has been nocturia, at least 3 times each night.

Onset of the present illness was acute on April 17, just 6 days before admission, and characterized by vomiting, headache, and facial edema.

On admission there was marked anasarca with moderate ascites. The facial edema was such as to produce closure of the eyes by the swollen lids. There were Hutchinsonian teeth. The tonsils were large and boggy. The blood pressure was 170/120 and there was a soft, systolic, apical murmur but no cardiac enlargement. There were no convulsions but the patient complained of headache and spots before the eyes. The urinary output was very scanty and this was followed by complete suppression for 60 hours. Hot packs, phlebotomy (150 c.c.) and 50% glucose intravenously caused some improvement in symptoms. Until the terminal rise, the temperature remained normal.

The blood pressure remained about 140/110 until near the termination. The urine was always very light in color, with a fixed specific gravity of 1.015 to 1.017 and contained 200-400 mgm.% of albumin with small numbers of casts, mostly hyaline, but occasionally granular and waxy. Red blood cells were not seen but pus cells were numerous.

Two weeks after admission the edema had disappeared and the patient was voiding freely. There was, however, an extreme second-

ary anemia and a persistent and extreme nitrogen retention in the blood. The anemia became so profound, following hematemesis and persistent oozing from the nose, mouth, and vagina, that a transfusion was given but with little benefit.

The patient remained drowsy most of the time but always responded to questions. The blood Wassermann (Kolmer technic) was twice negative and there was no beneficial effect from the use of inunctions and iodides, used on the assumption that there might be a remote possibility that the nephritis was of syphilitic origin.

The patient became, after the initial improvement, progressively worse, developed a profound acidosis, and died June 4, one and one-half months after the acute onset.

The blood examination variations are shown in the table following:

Date	N.P.N.	Urea N.	Cr'tin	R.B.C.	Hb.Gms%	Hb%
4/23				3,460,000	7.59	55
4/25		137	11.0			
4/26		100	4.5			
4/28	255	100	11.0			
5/3	270	150	10.5			
5/5	225	129	7.0	3,190,000	5.24	38
5/7	240	140	9.5			
5/9	175	140	9.0			
5/12	210	133	9.25	2,320,000	4.14	30
5/19	330	200	13.9	1,720,000	2.00	20
5/22		Transfusion		1,250,000	1.65	12
5/25				2,040,000	1.92	18
6/1				1,500,000	1.38	10
6/3	666	250	20.0			
6/4	450	350	18.0			

Autopsy: The body is that of a colored female aged apparently 6 years. There is an apparent generalized edema and the vulva and anus present an ulcerated and hemorrhagic appearance.

The tissues in general are pale and bloodless and show marked edema. The pericardial sac contains about 100 c.c. of clear, straw-colored fluid. There is a moderate hypertrophy of the left ventricle; no valvular lesions and tone of the myocardium is good. There is approximately 150 c.c. of clear serous fluid in the left pleural cavity together with relatively dense lateral adhesions. Lungs are pale but show no gross pathology of moment.

Abdomen contains a large amount of free fluid. Liver and pancreas present no gross abnormalities but the spleen appears somewhat fibrotic and smaller than normal.

Kidneys are small, with a granular surface when cut; capsule strips easily when cut; cortex pale in color. The uterus and adnexa show no abnormalities except a collection of small cysts in Douglas' pouch.

Microscopic examination of tissue sections revealed the following changes:

Liver: generalized cloudy swelling with occasional scattered areas of focal necrosis.

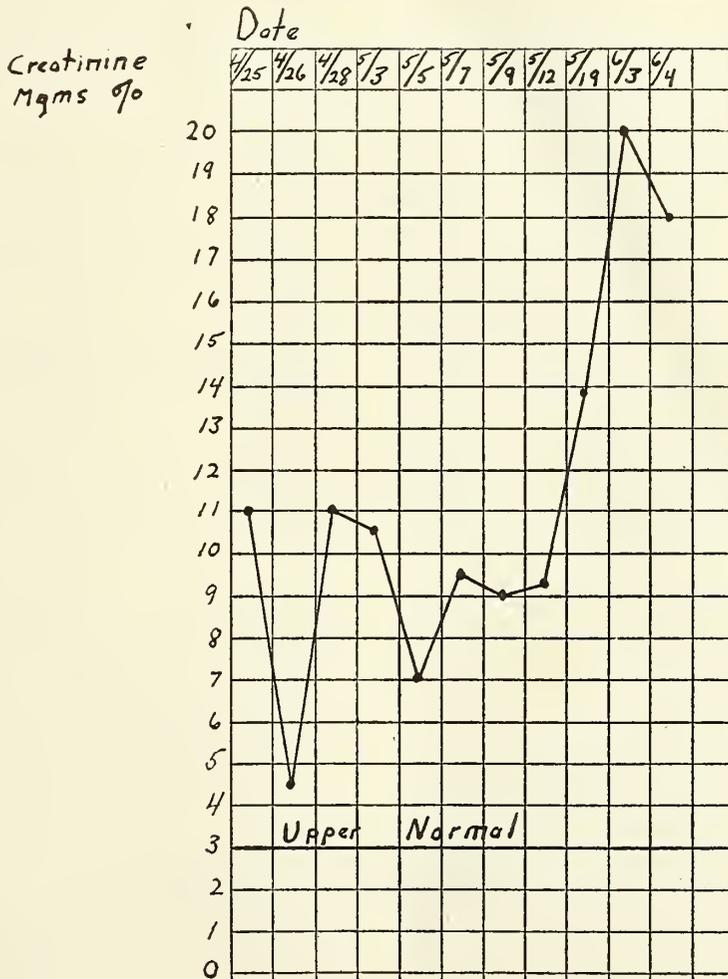
Spleen: diffuse cloudy swelling, interstitial hemorrhage, sclerosis of blood-vessels, and a slight diffuse interstitial fibrosis.

Kidneys: diffuse and extreme parenchymatous nephritis; marked sclerosis, and numerous punctate hemorrhages.

Lungs: well marked edema.

The particular interest in the case centers in the sustained creatinemia graphically shown in the chart:

Because of the positive serology in the mother and the history of probable specific treatment in infancy the possibility of a syphilitic nephritis was thought of, but the long period of quiescence prior to terminal illness, lack of response to specific treatment, and history of repeated attacks of tonsillitis—a not infrequent cause of nephritis—renders the probable etiologic course of events fairly clear.



Observations from the Lighthouse

SERUM TREATMENT OF DIPHTHERIA

While we are engaged in a state campaign for the eradication of diphtheria, it is interesting to note reports from other parts of this country and from foreign nations setting forth results of efforts to prevent and to cure this disease. From the Municipal Hospital of Ullevål, Oslo, Norway, Dr. Yngvar Ustvedt (Internat. Clinics, Dec., 1927) issues a statement. We must remember that diphtheria is a local process effectuated by action of the diphtheria bacillus in the mucous membrane of the throat, where the bacillus produces the toxin. This toxin goes into the lymph and blood and is transported to the organs and cells to which it has affinity. When the toxin is anchored to the cells, then it is difficult and after a short time impossible to loosen again the combination. Therefore, it is necessary to give the serum as early as possible. The effect of the antitoxin is prophylactic, i. e., the antitoxin is to bind the toxin before it is resorbed or at least before it is anchored to the cells. We have no means to measure the quantities of toxin produced in human diphtheria and must remember that the local diphtheria process may stop and the membranes disappear while the organism is still flooded with toxin. Clinical experience teaches that if we use antitoxin early enough, the local process will stop and the diseased recover without further symptoms. If the antitoxin is supplied later, the life can be saved but there will come symptoms from the heart or paralysis of peripheric nerves. Another point of great importance is the way of application of the serum. It seems that the intravenous method should be used generally; but we know that the anaphylactic shock comes on much easier and stronger by this application. The danger is much less with the subcutaneous and the intramuscular application than with the intravenous. After an intramuscular injection, effect can be seen in 12 hours, but generally there is no real influence on membranes and fever before 24 or 36 hours. The strongest evidence of specific effect of the serum is that for 33 years Ustvedt has not had a single child with larynx-diphtheria after being so treated. Another interesting point in the statistics is the difference in mortality between the towns and the country. Before the antitoxin treatment the death-rate was nearly the same, but now it is much less in the town than in the country, probably because the doctor is called sooner and the serum used earlier. As to the quantities of serum: For the nontoxic cases a comparatively small dose will suffice to stop progression of the local process and production of toxin, that is, 6,000-8,000 units. If the temperature does not fall, the forming of membranes does not stop or instead increases, repeat the dose. Age does not matter. In larynx diphtheria Doctor Ustvedt gives 10,000 units to small children; adults often get 20,000 units. In toxic cases he ordinarily gives an intramuscular injection of 20,000 units and after 2 or 3 hours 10,000 or 12,000 intravenously. The same doses are repeated in the severest cases after 12 hours and always the next day, often also, the third day. It is seldom that he does not reach a total amount of 80,000-100,000 units. Serum sickness is much more frequent after a large dose but may follow a small one. It is of importance to

know that the serum sickness is never dangerous; there being no case of death reported from this disease in contrast with anaphylactic shock, which comes immediately after the injection.

Treatment of the Patient with Pneumonia

Harlow Brooks, (Internat. Clinics, Dec., 1927) emphasizes the statement that for all practical purposes the medical profession is still as helpless in the treatment of pneumonia as it was a quarter of a century ago.

Much, however, has been learned as to treatment of the pneumonia patient, in contradistinction to treatment of the disease itself.

The most essential single object to be accomplished in the handling of these patients is rest, not only physical but mental and emotional as well. Quiet surroundings are needed. Visitors should be excluded.

The patient should be allowed to select his own position in bed. Cough should be combated by codein, morphin, or opium in another form. Bromides are also indicated when rest cannot be accomplished by physical means alone.

Where the cough is loose it is probably physiologic in intent and is best left alone. When dry and irritating, relief may be obtained by ammonium chloride or the iodides. In still other cases sedatives may be indicated.

Some cases do splendidly under the open-air treatment, others badly, especially those of influenza origin. Persons from tropical countries cannot stand this treatment.

The room-temperature should be low, except in cases of pneumonia following measles, scarlet fever or influenza, and in old age or in traumatic or debilitated cases.

Oxygen is very useful in control of cyanosis and in certain unexplained cases of dyspnea.

Most fatal cases of pneumonia terminate with a circulatory failure. The basic pathology in most cases of cardiac failure is a myocardial degeneration with a consequent giving way, a dilatation of that portion of the heart exposed to stress, in this disease the right heart. In young healthy subjects preliminary digitalis therapy is not indicated unless signs of circulatory embarrassment appear. In adults and aged patients the preliminary use of digitalis may save the day. In some instances strophanthus, caffeine and strychnia give better results. Caffein works admirably when the circulatory failure is associated with a nervous defect.

A method of treatment of associated crises of the pulmonary and cardiovascular systems is often seen in a properly timed venesection. This is particularly valuable in the early stages of the disease when the pulmonary congestion, perhaps with edema, is especially critical.

The most satisfactory measures for relieving tympanites are pituitrin or adrenalin, singly or associated, camphor, caffeine and occasionally strychnin with enemata.

The most satisfactory of the less frequently observed renal insufficiency is usually along circulatory lines, but theosin, diuretin and caffeine are usually sufficient to reestablish kidney action.

Water, fruit juices and sugar solutions given in abundance are always beneficial. Sufficient alkali to hold the urine nearly at the emphoteric point is often advisable.

Delirium usually calls for the active exhibition of chloral, of the bromides, or morphin, opium or codein.

Diet is of little importance.

When the pneumonia patient becomes septic very little can be done.

The patient who recovers from pneumonia will not be completely back to his normal condition for perhaps 6 months.

The Encephalogram in Childhood

Mettenheim (Internat. Clinics, Dec., 1927) has an interesting paper on cerebrospinal fluid studies in childhood:

The cerebrospinal fluid is to be held as (a) an ultrafiltration of the blood; (b) a specific product of secretion of the brain, especially of the choroid plexus. There is normally some, but not a constant relation between the composition of the liquor and the blood. This is changed and disturbed in diseases. The fact that the composition of the liquor differs at different levels of the axis of the cerebrospinal system both in health and disease renders necessary a fractionated puncture for diagnostic purposes.

The relation between the liquor and the blood is disturbed: (1) By changes in the composition of the blood and (2) by change in the permeability of the hematocerebral barrier, especially of the plexus, but also of the general surface of the central nervous system.

Permeability of the barrier may be brought forth by (a) bacteriologic irritation, (b) by chemical irritation and (c) by mechanico-physical irritation.

From the brain the fluid flows off through (1) the venous, (2) the lymphatic system and (3) through the sheaths of the cerebral and spinal nerves. From the spinal canal the flowing off by the venous plexus is not so quickly possible.

The pressure of the cisterna is positive in the new-born as well as in infants under pathologic circumstances. In infancy the liquor is easier to obtain by cisternal than by lumbar puncture. A spinal pressure of 6 mm. seems to be pathologic.

In the new-born there is occasionally no fluid obtainable. The pressure may be increased by pumping movements of the head of the child; by change of position of the body, by compression of the vessels of the neck or by cooling of the skin.

The relation of blood-sugar to the sugar in the fluid is not a constant one. In epidemic encephalitis, tetanus, acidosis and in many cases of nephritis the sugar content of the fluid is positive or increased. In tuberculosis the sugar is decreased or negative. In encephalitis the high sugar content is probably due to direct irritation of the sugar center by the specific virus.

In the new-born the fluid is usually of a yellowish color. The reaction of the blood and bilirubin is always negative.

After injury of the venous plexus by the needle, birth injuries, pachymeningitis, thrombosis of the sinus or tumor the fluid is sanguinolent. In tuberculosis, acute encephalitic meningitis and epidemic encephalitis pellicle is found. In purulent meningitis the fluid is turbid. In tubercular meningitis, serosa hydrocephalica chronica and acute encephalitis the fluid is clear, slightly cloudy or opalescent.

Cytologic examination.—(a) Quantitative: 5 normal.

Pleocytosis is found in all inflammations of the central nervous system. It is also found more often during the first 2 years of life. The cell count is increased in tuberculous meningitis and decreased in acute epidemic encephalitis.

(b) Qualitative; normal lymphocytes.

Pleocytosis: (1) Lymphocytosis is found in

lues, encephalitis and sometimes in meningitis serosa infectiosa.

(2) Leukocytes in all purulent meningitis.

(3) Mixed pleocytosis in the beginning of tubercular meningitis and after irritation of the meninges by repeated punctures at short intervals.

The appearance and prevalence of lymphocytes in chronic infectious diseases with their lipid virus, of leukocytes in purulent meningitis depends on the degree of intensity of irritation; a slight irritation brings about lymphocytosis, a greater irritation leukocytosis.

Great caution is advised in judging the roentgenograms of normal, hydrocephalic and porencephalic brains as there is often great difficulty in explaining the pictures.

In Lighter Vein

Dolling Up the Freaks

"You say your sister makes up jokes; then she's a humorist?"

"No; she works in a beauty parlor."—Boston Transcript.

Nize Baby

"I vant some powder."

"Mennen's?"

"No, vimmens."

"Scented?"

"No, I will take it mit me."—Columbus Dispatch.

Joyous Alibi

"You should be more careful to pull your shades down at night. Last night I saw you kissing your wife."

"Ha, ha, ha! The joke is on you. I wasn't at home last night."—The Office Cat.

Rah! Rah! Rah!

"Now, remember, my dears," said Mother Racoon to her children, "you must always watch your step, because you have the skin the college boys love to touch!"—Louisville Times.

To Be Well Shaken

A prominent city man who is as mean as he is wealthy, relates an English paper, is fond of getting advice for nothing. Meeting his doctor one day, he said to him, "I'm on my way home, doctor, and I feel very seedy and wornout generally. What ought I to take?"

"A taxi," was the curt reply.—Boston Transcript.

Turning Over a New Leaf

It was visiting day at the jail, and the uplifters were on deck.

"My good man," said one kindly lady, "I hope that since you have come here you have had time for meditation and have decided to correct your faults."

"I have that, mum," replied the prisoner in heartfelt tones. "Believe me, the next job I pull this baby wears gloves."—The American Legion Weekly.

Preliminary Program.

MEDICAL SOCIETY OF NEW JERSEY

The 162nd Annual Meeting, Haddon Hall, Atlantic City, June 6, 7, 8 and 9, 1928

ANNOUNCEMENTS

Credentials and Certificates

The Committee on Credentials will meet at Haddon Hall on Tuesday afternoon, June 5, and on Wednesday morning, June 6. Its office will be open constantly during the meeting.

The Constitution requires that all Fellows, Officers, Annual and Permanent Delegates, and Reporters shall register with this committee.

Permanent Delegates failing to register will be marked as absent by the Recording Secretary. Annual Delegates must present to this committee a certificate of election signed by the President and Secretary of their component societies. Without such certificate they cannot sit as members of the House of Delegates.

Every Permanent Delegate must present a certificate bearing the seal of the Society and signed by the Recording Secretary, and without such certificate he cannot register nor vote in the House of Delegates. Nominees for Permanent Delegates cannot register as Permanent Delegates until after their election by the State Society, when they will receive certificates from the Secretary so that they can obtain their appropriate badges.

Certificates of nominees for Permanent Delegates must follow the special form given in the Constitution on page 12. They should be sent to the Recording Secretary at least one week before the meeting, so that the names may be presented to the Society for election.

Each member of the Nominating Committee should present his certificate to the Recording Secretary before the opening of the afternoon session so that the names of the Nominating Committee may be announced as indicated on the program. The Nominating Committee will meet on Thursday, June 7, at 5:30 p. m., in the committee room.

Papers and Reports

All papers read before the Society or appearing by title on the program, whether read or not, thereby become the property of the Society. The author of each paper is required to give the Recording Secretary a legible copy of the same before reading. The expense of alterations in a paper after it is in type, and the cost of illustrations, is borne by the author. All manuscripts should be typewritten, double spaced, and on one side of the paper only.

Excepting orations, addresses of special guests, and the address of the President, the time to be occupied in the actual reading of a paper is limited absolutely to 20 minutes. Those opening the discussion are allowed 10 minutes each, others 5 minutes each.

Members desiring to present voluntary papers or reports of cases should first have their papers accepted by the Committee on Scientific Work and then apply to the Committee on Program for a position.

Papers and reports not presented when called

for by the President cannot be presented at a later time unless the regular order of business is completed.

All members of component societies who are in good standing are entitled to sit as associate members and have the privilege of discussing papers in the general session, but have no vote nor the right to take part in the discussions of the House of Delegates.

On arising to discuss a paper, the speaker will please walk forward to platform and announce his name and address clearly for the benefit of the Society. No member may speak a second time in any discussion.

All sessions will be opened promptly at the hour set, in order that the program may be carried out as planned.

The Board of Trustees will meet at Haddon Hall, Tuesday, June 5, at 8 p. m.

Committees or Boards desiring meeting rooms will please notify the Committee on Arrangements, M. W. Reddan, Chairman, or W. D. Olmstead, Secretary.

The rates at Haddon Hall, on the American plan, are:

Rooms with running water—	
1 person, \$6 to \$8 per day	
2 persons, \$12 to \$14 per day	
Rooms with bath—	
1 person, \$10 per day	
2 persons, \$14 to \$20 per day	

Exhibits

Exhibits of instruments, books, pharmaceutical preparations, x-ray apparatus, etc., will be shown in "Rutland" room of the hotel and members are urged to avail themselves of this opportunity to examine the very latest improvements in these various departments.

The degree of interest shown by the visitors in these exhibits mathematically increases or decreases the revenue to the Society. It's up to you to help.

DAILY PROGRAM

Wednesday, June 6, 1928, 9:30 A. M.

Meeting of House of Delegates

- Call to Order
- Report of Committee on Credentials, George H. Lathrope, Chairman.
- Reading of Minutes of 1927 Meeting.
- Report on Permanent Delegates.
- Nominees for Permanent Delegates.
- Report on Permanent Delegates.
- Report of Committee on Arrangements and Program, M. W. Reddan, Chairman.
- Report of Committee on Scientific Work, Ralph K. Hollinshed, Chairman.
- Report of Committee on Publication, Charles D. Bennett, Chairman.
- Report of Corresponding Secretary.
- Report of Recording Secretary
- Report of Executive Secretary.
- Report of the Board of Trustees.
- Report of Welfare Committee.
- Report of Judicial Council.
- Report of Committee on Finance and Budget.
- Report of Committee on Honorary Membership.

- Report of the Treasurer.
 Report of Board of Medical Examiners.
 Report of Committee on Public Hygiene and Sanitation, Gordon K. Dickinson, Chairman.
 Report of Committee on Standardization of Hospitals.
 Report of Committee on Indemnity Insurance.
 Report of Committee on Group Health and Accident Insurance.
 Report of Delegates to the American Medical Association and to State Societies.
 Report of Special Committee on Constitution and By-Laws, B. Van D. Hedges, Chairman.

SCIENTIFIC PROGRAM

Thursday, June 7, 1928, 9.30 A. M.

Symposium on Physical Therapy

- 9.30-9.50 Physical Adjuncts to Surgery
 William Martin, Atlantic City
 9.55-10.15 Physical Therapy Aids in Fractures and Orthopedic Cases
 William Doran, Jersey City
 10.20-10.50 Present Status of Diathermy in Pneumonia
 Harry E. Stewart, New Haven, Connecticut

Abstract.—Early history and first clinical reports. Modification of original technic; overlapping treatment of adjacent uninvolved lung proved to be of value; intensification of dosage, frequency and increased duration of treatment safe and useful in selected cases; hypotension and empyema not considered contraindications. Symptomatic improvement is the rule. Mortality figures covering many epidemics, and all types of organisms, steadily diminishing; now about 12%. Clinical employment earnestly recommended.

- 10.55-11.15 Ultraviolet Rays in the Treatment of Affections of the Nose, Throat and Mouth
 Charles R. Brooke, Newark

Abstract.—Technic of application described and benefit of treatment related. Reaction of ultraviolet rays upon the skin and mucous membranes considered. Dosage to be regulated.

- 11.20-11.40 Physical Therapy in the Hospital, with Moving Pictures of Apparatus in Use
 S. T. Snedecor, Hackensack

Thursday, June 7, 1928, 2 P. M.

Symposium on Gynecology and Obstetrics

- 2.00-2.20 Plea for Early Recognition of Cancer
 Edward J. Ill, Newark

Abstract.—In early recognition of the subjective symptoms, lies the only hope for the patient; the physician must ever bear this in mind. Insist upon thorough examinations. Any unusual discharge from genitalia must be investigated; particularly should a watery, pinkish discharge arouse suspicion. Cancer has become, in a measure, a controllable disease.

Discussion.—Opened by Stephen T. Quinn, Elizabeth.

- 2.25-2.55 Recent Progress in Gynecology
 John Osborn Polak, Brooklyn, N. Y.

Discussion.—Opened by Thomas B. Lee, Camden.

- 3.00-3.30 Influence of Blood Chemistry Studies on the Present Treatment of Pregnancy Toxemias
 Paul Titus, Pittsburgh

Abstract.—Evidence is accumulating to indicate that a glycogen deficiency in the maternal organism probably is the chief underlying cause of pregnancy toxemias, and it is reasonable to consider the various toxic states as being related to each other. Intravenous injections of hypertonic glucose solution, together with increased carbohydrate intake by mouth and by rectum, as treatment for pregnancy toxemias has been based on empiricism and theoretic grounds (the "carbohydrate deficiency theory") until recent work in the author's clinic showed both that hyperemesis is usually accompanied by lowered blood sugar readings and that eclamptic convulsions are probably hypoglycemic reactions. Based on these studies the principles of treatment of all pregnancy toxemias are alike, and depend primarily upon conservation of the remaining glycogen stores of the body and a restoration from their depleted state; the first is accomplished by inducing complete muscular rest through the use of sedatives and opiates; the second, by increasing the carbohydrate intake through intravenous injections of glucose and, when possible, the oral and rectal administration of carbohydrates.

Discussion.—Opened by John W. Gray, Newark.

- 3.35-3.55 Indications and Contraindications for Mechanical Interference in Delivery
 S. A. Cosgrove, Jersey City

Discussion.—Opened by A. W. Bingham, East Orange.

Friday, June 8, 1928, 9.30 A. M.

Symposium on Minor Neuroses and Psychoses

Foreword—How often the physician is consulted by persons who complain of a few vague, ill-defined sensations, or of more definite symptoms such as headache, anorexia, insomnia, a feeling of anxiety and apprehension, in whom a thorough physical examination is productive of negative results. The physician tells the patient there is nothing the matter with him, to go home, stop his worry and forget it. Stop his worry! As well tell a patient with Bright's disease of the kidneys to stop passing albumin. Some day we are horrified to read in the papers an account of one of these people becoming violently insane, or committing suicide or, worse still, a terrible homicide followed by suicide or attempted suicide.

More than one-third of the patients seen by neurologists and psychiatrists in our large cities suffer from a minor neurosis or psychosis and this does not include the large number of individuals treated by stomach specialists for gastro-intestinal symptoms, by cardiac specialists for palpitation and tachycardia, by genito-urinary specialists for frequent micturition, by surgeons and gynecologists for various pains and

paresthesias, or by cults and spinal manipulators for backache, headache, aching limbs and abdominal and pelvic distress.

These victims of vague and imperfectly understood neuropsychoses, tormented by somatic paresthesias and insomnia, and harrowed by strange and undefinable feelings of depression, anxiety and fear, wander from physician to physician and from clinic to clinic in search of relief. The busy physician feels the pulse, takes the blood pressure, looks at the tongue, asks a few questions, prescribes a cathartic and perhaps a tonic and sends the patient away with the hope that he will get better. The more careful physician or the one with more time at his disposal will subject the patient to a more thorough physical examination and, failing to find any objective symptoms, will address himself to the study of the mental condition; but here often he is unable to detect any evidence of illusions, hallucinations or delusions; or finds the memory unimpaired and that the patient comprehends his environment, follows the train of thought in conversation, does problems in mathematics, and shows little or no defect in the processes of idea association. The physician often exhausts his diagnostic resources with negative results and is forced to sit in blank helplessness before a picture of misery. Being a conscientious man of science he will not prescribe treatment for which he is unable to find a rational indication. So, he tells the patient there is nothing the matter with him, and that he must stop his worry. After repeated experiences of this kind the unfortunate patient commits suicide, or takes to drink or drugs, or becomes insane, or it may come to pass, as it often does, after what appears to him an endless period of suffering, that he recovers and at once begins to wonder how it all happened; being sure only that he owes life and reason to the last remedy tried, whether it be Christian Science, osteopathy, psycho-analysis, a trip to the mountains, removal of his teeth and tonsils, or old Dr. Mixen's vitalizing tonic. When a subsequent attack develops he comes to believe himself much worse than before because the same remedy that had worked a miracle now fails completely. He does not know that his disease is self limiting and that a majority of such cases recover from a given attack, with or without treatment.

These diseases of the emotions variously designated as neurasthenia, cerebrasthenia, psychasthenia, apprehension, psychosis, hypochondria, are often overlooked or made light of and are not considered as concrete entities by many well meaning physicians. Some of these symptoms are also often the forerunners of impending mental dissolution; harbingers of coming evil that cast their shadows before. They may be the first stages of manic-depressive-psychosis, dementia praecox, paranoia, or even of paresis.

What can the family physician do in these cases and how can the neurologist and psychiatrist help him? Every effort should be made to get the patient to understand that his disease, in most cases, is self limiting; help to keep up his courage and not let him fall into the hands of charlatans, cults, hypnotists, and Fruedians, who hang on and bleed him of his resources until the disease runs its course and then boast of a cure; nor have him carved up by the over-enthusiastic surgeon who thinks he is cutting out the disease. While we have considerable admiration for daring, courageous, pioneers in the field of medicine as well as in other domains of hu-

man enterprise, too much credulity and enthusiasm should be counterbalanced by the calm, disinterested scientific judgment of a cautious and conservative profession.

W. H. Hicks, Newark

9.30- 9.50 Classification of Minor Neuroses and Psychoses

Samuel F. Gorson, Atlantic City

Abstract.—Functional nervous and mental disorders may be roughly divided into minor and major psychoses. In the minor group are psychoneurosis, neurasthenia, psychasthenia, hypochondria, hysteria; in the major group, manic-depressive psychosis, dementia praecox, and paranoia. Toxic insanity, paresis and organic dementia have definite and demonstrable physical causes, such as alcohol, syphilis, injury to the brain (cerebral hemorrhage, tumor, wounds). Dr. Kraepelin 40 years ago placed several of the different forms of mental diseases in one generic group and called it manic-depressive-psychosis; so, the tendency now is to group the lesser disorders together while the severer forms are put into a separate class. Some writer has stated rather sarcastically that when a psychiatrist thought he had learned all that could be learned about mental diseases he proceeded to construct a new classification. This procedure has given rise to much confusion in terminology. The tendency now is to simplify and group together diseases of similar clinical aspect where the exact cause and pathology are still in the stage of theory and controversy. History and general consideration of recent classifications reduced to simplest form for the general practitioner.

10-10.20 Etiology of Minor and Major Neuroses

C. Fred Becker, Camden

Abstract.—predisposing causes; heredity; neuropathic organization; unstable, sensitive, explosive temperament.

Exciting causes :

(1) Some chemico-physiologic disturbance of metabolism; toxic by-products that have a selective action on the nervous mechanism of emotional equilibrium. This disordered metabolism may be due to or influenced by, (a) physical or mental stress or strain; (b) emotional shock; (c) trauma; (d) sudden change in habits of life; (e) excessive, inhibited, or perverted venery; (f) eye-strain; (g) dyspepsia; (h) constipation; (i) arterial sclerosis; (j) anemia; (k) unphysiologic living in general; (1) enfeebling diseases.

(2) Poisons or toxins in the blood; (a) exogenous, like alcohol, drugs, coffee, tobacco, gases, irritating or poisonous volatile fumes; (b) endogenous, such as bacterial toxins from infectious diseases, particularly influenza and syphilis.

(3) Focal infection: nasopharyngeal disease, sinusitis, tonsillitis, decayed teeth or any suppurative process located anywhere in the body.

(4) According to the metaphysics of Freud, there is but one cause for all nervous and mental disorders, not demonstrably due to physical lesions, and that is sexual trauma—subconscious inhibitions, suppressed or unrealized libido—and are cured by interpreting the patient's dreams or by digging up from the subliminal consciousness some obscene fancy or experience that has been forgotten by the patient since babyhood.

(5) According to Christian Science all these psychoses are caused by wicked, sinful thoughts; or, indeed, the symptoms themselves are naught

else, and are cured by simply substituting righteous thoughts for sinful ones.

(6) According to the endocrinologist, some of these psychoses—notably dementia praecox—are the result of disfunction of the endocrines and are treated by feeding the patient on glandular substances.

(7) The astrologer holds temperamental anomalies and psychoses are caused by position of the stars and planets at the time of the patient's birth.

(8) The chiropractor maintains all these neuroses and psychoses, together with practically all other human ills, are caused by dislocated vertebrae and are cured by reducing same.

10.25-10.45 Pathology of the Minor Neuroses
Thomas A. Christian, Greystone Park

Abstract.—Since these diseases do not cause death per se little is known of the morbid changes in the body except by deductive inference. There are many theories: hereditary disfunction of the nervous system; anomalous organization of the cerebrospinal and sympathetic nervous systems; biochemic toxic by-products; bacterial toxins; exhaustion of the dynamic elements in the central nerve cells; disorder of the endocrine functions with lack of hormone equilibrium; disassociation of the personality; loss of normal flexibility of the synaptic functions of groups of neurons; repressed wishes and shock experiences organized by the subconscious mentor.

The pathologic findings in some cases are not sufficient to explain the symptoms and, in consequence, the actual pathology is in a state of great confusion. The toxemias play a rôle, especially that type originating from focal infection. A number of cases of the minor neuroses and psychoses have been listed as actually showing evidences of focal infections and disorders of the endocrine glands and such cases recovered after correcting the known pathology.

10.50-11.10 Symptomatology and Treatment of the Minor Neuroses

William H. Hicks, Newark

Abstract.—The symptoms of neurasthenia, psychasthenia, cerebrasthenia, hypochondria, apprehension, psychosis and minor phases of hysteria merge into and overlap each other and may be roughly described together as a clinical group. Physical symptoms predominate in neurasthenia; mental symptoms in psychasthenia; both physical and mental symptoms are combined in hypochondria; while in hysteria there is added another group of symptoms, anesthesia and paralysis. When disorientation, incoherence, hallucinations and delusions are present, the case is one of the major psychoses. Strange as it may appear, the minor neuroses and psychoses rarely pass into true insanity; 90% recover from a given attack. The course varies from a few weeks to many months. Some do not fully recover. Most cases are prone to recurrent attacks all through life. Sometimes a few months intervene between attacks; sometimes a few or many years.

Neurotics should avoid alcohol and tobacco and partake of coffee and tea sparingly. The bowels should be kept active. Exercise moderately and in the open air. Hydrotherapy for tonic and sedative effects. Massage, under direction of physician. Osteopathic and chiropractic manipulations do more harm than good. Climate of little effect but change of scenes often helpful.

11.15-11.45 What Every Doctor Should Know About Insanity

Joseph Collins, New York

Friday, June 8, 1928, 12 Noon

Presidential Address

Walt P. Conaway, Atlantic City

Friday, June 8, 1928, 2 P. M.

Report of Nominating Committee and Election of Officers (No other business)

2.15- 2.35 Peritoneal Anomalies

Francis H. Glazebrook, Morristown

2.40- 3.00 Duodenobiliary Drainage; Nonsurgical

Maurice Asher, Newark

Abstract.—Duodenal work that was done prior to Meltzer's observation of the action of magnesium sulphate. Lyon's work later. What others have done since. Diagnostic value of the procedure. The chemical, macroscopic and microscopic findings and conclusions to be drawn therefrom. Therapeutic value and limitations.

Discussion.—To be opened by Drs. Lyon, of Philadelphia, and Otto Lowy and George Blackburn, of Newark.

3.20- 3.40 Study of 250 Gall-Bladder Operations

Max Danzis, Newark

Abstract.—The advantages of cholecystectomy over cholecystostomy are given from a personal follow-up in this series of cases. The incidence of postoperative hernias following operation is given. The question of drainage in cholecystectomy, and its indication and contraindication in certain types of cases is considered. The operative technic with particular reference to prevention of injury to the extrahepatic bile-ducts is briefly outlined. Postoperative sequels, both early and late, in each type of operation included in the series, are analyzed and their probable causation discussed.

Discussion.—To be opened by Paul M. Meecray, Camden.

3.45- 4.05 Diagnosis and Treatment of Tachycardia

Louis Levin, Trenton

Abstract.—First, a short review of the normal mechanism of impulse transmission in the heart. The tachycardias will next be divided into (1) sinus and (2) ectopic or nonsinus types, and each will be considered with reference to etiology, diagnosis and treatment. Mention will be made, because of its importance, of the electrocardiograph but no technical discussion will be attempted. The paper will stress the desirability of greater effort to recognize the types of tachycardia because of the manifest importance in treatment.

Discussion.—To be opened by Harvey M. Ewing, Newark.

4.10- 4.30 Severe Hemorrhage from the Stomach, with Special Reference to Gastrotaxis

C. A. Pons, Long Branch, (reader)

B. M. Meine and V. Bleukel

Saturday, June 9, 1928, 8.30 A. M.

Clinical Demonstrations, Atlantic City Hospital

- 8.30-10 Nose and Throat Operations
Gynecologic Surgery
- 10-12 Genito-Urinary Operations
General Surgical Procedures
General Medical Clinic
Pediatric Clinic
- 12 Noon Inspection of New Building, Dispensaries and Laboratories

SCIENTIFIC PROGRAM

Section on Ophthalmology, Otology and Rhinology

Chairman: Linn Emerson, Orange

Thursday, June 7, 1928, 9.30 A. M.

- (1) The Trouble with the Tonsil Operation
Frederick F. C. Demarest, Passaic

Abstract.—Consideration of the different methods of operating and deductions from personal experience and observation.

- (2) Control of Hemorrhage Following Tonsillectomy

Harry R. North, Trenton

Abstract.—Tonsillectomy a "major" operation. Dangers of hemorrhage very real. Control properly begins before patient enters the operating room, and calls for compliance with rules applicable to hemorrhage from any part of the body. Dissection method made safe by adherence to general surgical principles.

- (3) Removal of Tonsils by Endothermy

Jack Blumberg, Elizabeth

Abstract.—Statement of present status of tonsillectomy with special reference to complications. Can these complications be obviated? What endothermy is and how it works. Microscopic and macroscopic effect upon tissues. Use of endothermy in tonsillectomy; technic and results.

General discussion of above named papers.

Thursday, June 7, 1928, 2 P. M.

- (1) Cancer of Larynx. A Plea for Early Diagnosis

Henry B. Orton, Newark

Abstract.—Reporting a series of 69 cases of laryngeal carcinoma; 21 having been operated upon, and 11 of these patients being still living. Discussion of various forms of treatment; thyrotomy, laryngectomy, resection of cartilage, diathermy, x-rays and radium. Presentation of patients and exhibition of lantern slides.

Discussion.—To be opened by W. P. Eagleton.

- (2) Diagnosis and Treatment of Maxillary Sinusitis

Charles S. McGivern, Atlantic City

Abstract.—Consideration of frequency with which maxillary sinusitis is overlooked. Discussion of diagnostic technic with emphasis upon necessity for proving patency of nasal orifice of the antrum. New method of demonstrating such patency. Local medical and surgical treatment.

- (3) Septal Deviations and Their Correction

Theodore W. Corwin, Newark

Abstract.—Description, anatomic, physiologic and pathologic. Selection and preparation of patients for operation. Avoidance of complications.

Friday, June 8, 1928, 9.30 A. M.

- (1) Illumination and Asthenopia

Elias J. Marsh, Paterson

Abstract.—Poor lighting a cause of eye-fatigue; may be insufficient, excessive, badly distributed, or unsuitable in quality. Relation of intensity to speed and accuracy of vision. Effect of glare. Illumination versus refraction in eye-strain. The ophthalmologist's interest in his patient's working conditions. Illustrative cases.

Discussion.—To be opened by E. S. Sherman, Newark, and, A. L. Powell, General Electric Company (by invitation).

- (2) Traumatic Lesions of the Head in Relation to the Ophthalmologist

Wells P. Eagleton, Newark

- (3) Acute Retrobulbar Neuritis Caused by Inflammation of the Sphenoid Sinus. Report of Cases

W. Blake Gibb, Morristown

Abstract.—A brief outline of the anatomy, pathology, mode of infection, and diagnosis in this type of case, with special reference to the recent investigations by Meller and Hirsch showing that the inflammation spreads from the sinus through the medullary spaces in the intervening bone to the optic canal, producing an inflammatory edema of the optic nerve sheath. The author believes in operative intervention but the medical treatment is fully discussed. Two cases successfully operated upon, occurring in author's practice in one month, are reported.

- (4) Interpretation of Visual Fields

Norton L. Wilson, Elizabeth

Abstract.—Anatomy and physiology of visual pathway. Lesions in the optic tract often give fields different from those of lesions in cortex. Study of visual fields from day to day may be helpful in prognosis as well as diagnosis. Comparison of the perimeter and the compimeter.

Friday, June 8, 1928, 2 P. M.

- (1) Question of Operative Intervention in Acute Purulent Otitis Media

E. Blair Sutphen, Morristown

- (2) Aural Sepsis

Henry C. Barkhorn, Newark

Abstract.—Local: operations too early or too late. Mixed infection from external canal. Management of postoperative fever. Systemic: greater frequency in chronic mastoiditis. Dangers of acute exacerbations. Diagnostic pitfalls in chronic otorrhea. Significance of the time element in development of complications, and importance of a careful chronologic history and bacteriologic examination at time of original myringotomy and of mastoidectomy. Early diagnosis and management of sinus thrombosis as developed by Eagleton.

- (3) Retinal Disease with Massive Exudation. Report of a Case

Willard G. Mengel, Camden

Abstract.—Reviews the literature and classifications of Coat's Disease. The course of the disease over a period of 10 months shows constantly changing fundus lesions as follows: immense yellowish white mass beneath the retinal vessels, detachment of retina, vessel changes, aneurysmal dilatations, and finally secondary glaucoma. There is an associated tuberculous history and an indefinite sinus affection. The relationship to circinate retinitis and the angiomatosis of Von Hippel is noted.

- (4) Creeping Ulcers of the Cornea
Dikran M. Yazujian, Trenton

SCIENTIFIC PROGRAM

Section on Pediatrics

Chairman: E. W. Murray, Newark

Thursday, June 7, 1928, 9.30 A. M.

- (1) Value of Acidified Milk in Infant Feeding
F. I. Krauss, Chatham
- (2) Our Annual Winter Infections of the Respiratory Tract in Childhood
Arthur Stern, Elizabeth
- (3) Diagnosis and Treatment of Congenital Syphilis
A. J. Casselman, Camden
- (4) Treatment of Anemia in Infancy and Childhood
J. O. McDonald, Trenton

Thursday, June 7, 1928, 2 P. M.

- (1) Experiences in Use of Antitoxin in Scarlet Fever
Edwin H. Place, M.D., Boston
(Ass't Prof. Pediatrics, Harvard Med. School)
Discussion
- (a) Ellis E. Smith, Medical Director Essex County Isolation Hospital
- (b) Frank J. Osborne, Health Officer of East Orange
- (c) John F. Anderson, Medical Director of Squibb's Laboratories
- (2) Experience with Special Biologicals in Treatment of Pneumonia
Russell L. Cecil, New York
(Ass't Prof. Clinical Medicine Cornell University)
Discussion
- (a) Albert E. Rousel, Prof. Medicine, Graduate School, University Pennsylvania
- (b) J. Finley Bell, Englewood
- (c) R. Hunter Scott, Newark

Friday, June 8, 1928, 9.30 A. M.

- (1) Enlargement of Thymus Gland
Elmer G. Wherry, Newark
- (2) Thymic Enlargement
Harry B. Silver, Newark
- (3) Splenectomy for Hemorrhagic Purpura of Childhood
Walter B. Stewart, Jr., Atlantic City

Friday, June 8, 1928, 2 P. M.

- (1) Practical Infant Feeding in Health and Disease
C. P. Lummis, Bridgeton
- (2) Pyuria from the Pediatric Standpoint
F. C. Johnson, New Brunswick
- (3) Trials and Tribulations of the Newborn
Joseph H. Marcus, Atlantic City
- (4) Simplified Diagnosis of Heart Murmur in Children
Stanley Nichols, Long Branch

PROGRAM WOMAN'S AUXILIARY MEETING

Thursday, June 7, 1928, 10 A. M.

Business Meeting of Delegates, in the Gold Room, Hotel Chalfonte

- (1) Call to order, by President, Mrs. A. Haines Lippincott
- (2) Reading of Minutes of last meeting
- (3) Appointment of Nominating Committee
- (4) Work of the Women's Auxiliaries.
- Addresses by:
Mrs. John O. McReynolds, Dallas, Texas
Mrs. Southgate Leigh, Norfolk, Va.
Mrs. W. Wayne Babcock, Philadelphia, Pa.
- (5) Address by President of State Medical Society, Dr. Walt P. Conaway

Thursday, June 7, 1928, 2.30 P. M.

- (1) Reports of Officers of the Woman's Auxiliary to the Medical Society of New Jersey
- (2) Reports of Presidents of County Society Auxiliaries; speeches limited to 5 minutes each.
- (3) Field for Coöperative Labor between Auxiliaries and County Societies
J. Bennett Morrison, Secretary,
Medical Society of New Jersey
- (4) Report Upon Work Accomplished Through the County Auxiliaries
Mrs. E. C. Taneyhill
Associate Educational Secretary

Thursday, June 7, 1928, 9 P. M.

Social Gathering

- (1) Ten Minute Addresses by the Visiting National Auxiliary Officers
- (2) Musicales by Dorothy Johnstone-Baseler Harp Ensemble (7 harps), and Helen Buchanan-Hitner, soprano
- (3) General Reception, in honor of National Auxiliary Officers

Friday, June 8, 1928, 10 A. M.

- (1) Meeting of Delegates in Gold Room
- (2) Report of Nominating Committee
- (3) Election of Officers
- (4) Address: Public Health Work That May Be Accomplished by Women
Mrs. Russell A. Shirrefs, Chairman
Public Health Committee, State Federation of Women's Clubs
- (5) Future Work of the Auxiliary
Henry O. Reik, Editor
New Jersey Medical Journal
- (6) Installation of Officers

Friday, June 8, 1928, 2.30 P. M.

Card Party, Tendered by the Woman's Auxiliary to the Atlantic County Medical Society

Friday, June 8, 1928, 9 P. M.

Dance and General Entertainment (see special program)

PROGRAM OF GENERAL ENTERTAINMENT

Thursday, June 7, 1928, 9 P. M.

In Vernon Room

This evening's entertainment is under the auspices of the Woman's Auxiliary to the State Society.

The Dorothy Johnstone-Baseler Harp Ensemble with Mrs. Helen Buchanan-Hitner, Soloist.

These 8 gifted artists form a unique and interesting organization and they present a most varied and delightful program in a truly charming setting. A detailed program of the musical numbers will be issued later.

Friday, June 8, 1928, 9 P. M.

In Vernon Room

A dance, with unusual entertainment features, presented by artists of renown, from 9 p. m. until midnight.

Dance music will be rendered by "Vernon Room Serenaders", a seven-piece orchestra of exceptional merit.

A worth-while "Attendance Prize" will be given; every lady arriving between 8.45 and 9.15 p. m. will receive a number at the door, and the one holding the **lucky number** will be awarded the attendance prize.

Prizes will be awarded for "Lucky Number Dances", "Moonlight Waltz", and other features to be announced.

Members will please note that our evening entertainments are planned as social entertainments, pure and simple, and no business or scientific paper or discussion will be permitted to intrude.

LADIES' ENTERTAINMENT

Friday, June 8, 2.30 P. M.

A Bridge Party will be arranged by a committee of the Woman's Auxiliary to the Atlantic County Medical Society. The place of meeting will be Music Room, Hotel Chalfonte.

It is understood that Thursday evening and Friday evening entertainments in Vernon Room are for the members and ladies.

Coupon books will be issued to the ladies, as in the past, entitling them to rolling chair rides.

The Committee on Program and Arrangements will gladly arrange for sailing parties, sightseeing trips, or golf privileges at the nearby country clubs, for groups who may desire such diversion. See Dr. W. D. Olmstead, at the Registration Desk.

Professional Reports

At a meeting of the House of Delegates, June 11, 1927, the following resolution was adopted: "That the report of the Board of Trustees and the reports of committees which are to be acted upon in the sessions of the House of Delegates, be printed in the Journal a month before the meeting in order that the delegates may be acquainted with the business that is to come before them."

In compliance therewith, the Editor requested the officers and chairmen of standing committees to submit their reports before April 15, for publication in the May Journal; the following reports include all that were received up to April 25. Several of these reports are only tentative in character; it being impossible, for instance, for the Treasurer or the Chairman of the Publication Committee to supply in April figures which would show the true state of affairs for the fiscal year ending June first. Likewise the Executive Secretary's Report will have to be submitted subject to some alterations at the time of meeting.

The plan is new to our society and may not work out to perfection on this first trial, but it is a step in the right direction and will doubtless evolve satisfactorily in the course of time.

Report of the Board of Trustees James Hunter, Jr., Secretary

The Board of Trustees held a special meeting on Sunday, October 23, 1927, at the Stacy-Trent Hotel, Trenton, N. J. The salary of the Executive Secretary's Assistant, Mrs. Taneyhill, was on motion ordered paid as provided for by the House of Delegates.

The date of the annual meeting for 1928 was, on motion, set for June 6 to 9, 1928, inclusive.

The Committee on Program and Arrangements asked that an extra day be added to the session next year so that an entire day, Wednesday, June 6, may be devoted solely to work of the House of Delegates. On motion this request was granted.

The Program Committee was authorized to provide for special section meetings, one on Pediatrics and one on Ophthalmology, Otology and Rhinology.

The Committee on Insurance was authorized to develop the question of automobile insurance at favorable rates.

On motion, it was decided that all vouchers of the Executive Secretary, excepting those connected with the Journal, should be endorsed by the Chairman of the Welfare Committee.

The Trustees feel that members of the state society should pay special attention to changes in the program of scientific work, resulting from the experiment of holding section meetings. This has made a strong appeal to the younger element of membership, and for that reason we should all study the results of the innovation.

Preliminary Report of the Treasurer Elias J. Marsh

As the treasurer's books cannot be balanced till the close of the fiscal year, May 31, it is impossible to give figures at this time which would be of any value. It must suffice for now to say that the receipts have already exceeded the esti-

mated income, with several hundred dollars yet to be received, and that on the other side every budget account still has a credit balance which should be sufficient, except the Publication Committee, which will probably have a small overdraft. The net result should be a comfortable balance, so far as can now be foreseen, and unless some new work is taken up as an additional source of expense, it should not be necessary to increase the assessment next year.

In the course of his study of the Society's finances, and the fiscal problems connected with its future development and expansion, the Treasurer has, in the past month, reviewed the entire financial history of the society for 160 years, so far as it is set forth in the published Transactions. The purpose of this search, aside from general historic interest, was to discover whether any definite financial policy has ever been adopted by the society, either formally or by custom and general consent. No trace of any consistent policy has been found, but rather a consistent lack of any plan, or the reversal of any which seemed to be developing. Some times individual treasurers have had plans which they have worked out, only to have them changed by their successors, or overruled by the society. Two men, in the long history of the society, have held the office of treasurer for over 30 years, but in each case the financial status of the society at the end of this long period was not essentially different from the beginning, except for natural increase in the size of the figures. This is no reflection on anyone; undoubtedly it was in accordance with the ideas of the society and of the treasurers themselves to have it so. The question now to be raised is whether or not the time has come for a new policy.

This society is now in a stage of expansion, and is considering further expansion, not so much in membership—that comes with natural growth of the community, as it has in the past—as in scope and activity. This may not be formal; it may even be unconscious, but it is in the air—in the minds of the members—wherever they gather and talk things over, in harmony with the spirit of the times. We want a home, at least a headquarters, for our work; we want a museum or exhibition place for our proposed historic and other collections; we want to undertake new work of various kinds, according to our particular interests. The Treasurer's Report is not the place to discuss these proposals, but it is the place to point out that it takes money to pay for them, and that it might be wise to accept the general policy of holding such accumulations as may happen in the natural course of events. Many times the society has had balances in the treasury which, if held and not dissipated, would have put us now in a position to provide a headquarters or something else we would like to have. In his comparatively short tenure, the present treasurer has seen some \$7000 accumulated balance vanish, that should have been held, spent for current uses which should have been paid for in the regular way. It is not proposed that any effort should be made deliberately to accumulate a fund, unless for some definite purpose agreed upon in advance, but only that when a balance arises by chance, above a safe working balance, it be set securely aside.

Three years ago the society formally created for the first time a permanent capital fund. This fund now amounts to \$6000. Had it been created sooner, it might now be several times that. Our present charter limits our property holdings to

a value of \$1000—rather illiberal when we consider that the charter of 1830 allowed a property value of \$2000 a year to the state society and \$1000 to each county society. However, it will be some time before we need trouble ourselves over this limit. For the present, it will suffice to consider whether or not it is desirable to come gradually nearer to it as opportunity offers.

**Preliminary Report of Publication Committee
For the Period June 1, 1927, to April 1, 1928
Charles D. Bennett, Chairman**

Herewith is submitted the annual report of the Chairman of Publication Committee for the 10 months running from June 1, 1927, to April 1, 1928. This report is of course incomplete and unsatisfactory but is necessarily presented in this way because of the resolution adopted at the last annual meeting requiring that reports of the standing committees be published in the Journal at least 30 days prior to the annual meeting of the society. This made it necessary that such report should appear in the May issue and as the Editor requested that the report be in his hands not later than April 15 it would seem best to close the report on the first of April.

The Chairman trusts that this report may be looked upon as a tentative one and he will bring to the annual meeting a complete report for the 12 months, up to June 1, which he is sure will give a much more favorable view of the condition of the Journal.

The present details are therefore submitted without further comment.

Report, June 1, 1927, to April 1, 1928 (10 months)

RECEIPTS	
Balance on hand May 31st,	
1927	\$ 573.61
Advertising	7,488.25
Subscriptions (extra)	45.60
Sale of Journal (extra copies)	11.28
Bills Receivable	587.55
Cash on hand April 1st, 1928	962.13
TOTAL	\$9,668.42

EXPENDITURES	
Commissions paid (Coöperative)	\$ 565.25
Amount of Commissions	
O.K.'d local canvasser ...	188.25
Discounts paid	147.62
Chairman's Salary	416.66
Chairman's Expenses	117.71
Printing and Mailing of Journal O.K.'d	8,153.16
Reprints O.K.'d	91.75
Index	100.00
TOTAL	\$9,780.40

Report, June 1, 1927, to April 1, 1928 (10 months)

SUMMARY	
Amount of advertising secured by Co-operative	\$2,859.95
Amount of advertising secured locally	3,727.18
Amount of discount and commission allowed Coöperative	678.34
Amount of discount allowed locally to advertisers	34.53
Amount of commission O.K.'d to local canvasser	188.25
Total amount of advertising	7,488.25
Total cash receipts from all sources	6,341.37
Total amount paid Treasurer	6,059.85

Report of Committee on Public Hygiene and Sanitation

Gordon K. Dickinson, Chairman

Our committee made several attempts during the year to get together. Dr. Spence and myself each time and occasionally one other member met. We decided on making an effort to have private hospitals investigated and standardized. As Commissioner Ellis had prepared a Bill for introduction at the General Assembly, calling for the licensing and regulation of nursing homes and private hospitals, we took advantage of the opportunity to support that movement. Enactment of his amendment provides us now with a legal definition of a private hospital and with a penalty clause applicable to those who attempt to run a hospital or nursing home without proper license.

Report of Welfare Committee

Andrew F. McBride, Chairman

The organization meeting of the Welfare Committee of this year was held at Trenton, Sunday, October 9, 1927, and since that date we have held special meetings on January 15 and January 29, 1928; all these meetings being well attended. The minutes of the October session were published in the November Journal, and those of the January sessions appear in full in the Journal of March. In consequence of this publication of detailed reports, it would seem unnecessary to repeat that matter at this time. Furthermore, the report of the Executive Secretary will probably contain references to the committee's work, most of which is conducted through his office.

As a special piece of work, the Welfare Committee gave such cooperation as it could to the Crippled Children's Commission, urging the medical profession to aid the survey as conducted throughout the state, and supporting legislation designed to improve the condition of such unfortunate as might be found.

The sole controversial matter before our committee this year concerned the question referred to us last June by this House—that is, whether we should endorse the proposition of the Board of Medical Examiners to seek enactment of a law requiring annual registration of physicians. When this question came under our consideration a poll of the Welfare Committee, conducted by mail, brought 24 responses (membership of the committee consisting of 36), and of the 24 voting, 16 favored the proposition, 6 were opposed, and 2 desired to withhold opinions until an actual copy of the proposed law could be seen. During the winter an informal referendum was taking place among the county societies, and, the result thereof was practically as follows: 16 county societies endorsed the proposition; 1 county, Essex, voted disapproval; 1 other, Middlesex, first approved and later rescinded its action; 3 counties have taken no action.

While a majority of the Welfare Committee was from the beginning favorably inclined toward the Board's proposal, and reports coming from the county societies as they met indicated an overwhelming majority giving it endorsement, we felt that it might be unwise to go before the Legislature without trying, at least, to secure unanimous support of the profession. If any of our component organizations contemplated active opposition we would make a sorry exhibition at Trenton. With a desire to promote harmony and, if possible to present a united front, we held

a special meeting at Newark and invited all members of the Essex, Hudson and Middlesex county societies to attend and present their objections to the proposed legislation.

The hoped for harmony did not eventuate from this gathering. Instead, the vehemence of the opponents was such that we deemed it best to postpone further action at the moment and to await advice from this House of Delegates. We respectfully suggest, therefore, that you again consider this question, provided the State Board of Examiners still wishes to present the Bill, and that you determine authoritatively what action shall be taken. There should be no question about the justness or validity of majority rule, and it should be understood that, whatever the decision of this body may be, every component society shall abide by that decision.

The 1928 session of the General Assembly of New Jersey was the mildest with which we have had to deal in recent years. We sought no special legislation. Support was given to measures designed to facilitate the work and promote the aims of the Commission on Care of Crippled Children, and to the amendment to the law providing for state control of private hospitals and nursing homes. At no time was there any apparent danger of having objectionable bills enacted into law. The record is, briefly, as follows: Assembly 119, for licensing naturopaths, reached the third reading file in the House but did not come to vote. A. 193, designed to confer upon osteopaths greater privileges in the practice of medicine, reached a vote in the House and was defeated by a large majority. A. 207, to establish a board to examine and license cosmetologists, passed the House but was suppressed in the Public Health Committee of the Senate. A. 296, a special privilege bill to license a blind chiropractor, met the same fate; that is, it passed the House but died in the senate. A. 428, permitting optometrists to use mydriatics, never came out of the committee to which it was originally assigned.

The skill of our Executive Secretary in dealing with legislative problems is well shown in the results obtained. His work this year in developing the public educational program—wherein he has been most ably seconded by the assistant you provided for last June—and in promoting the Antidiphtheria Campaign, the Tuberculosis Early Diagnosis Campaign, and the Tri-state Medical Conferences, is, I believe, heartily approved by every member of the Welfare Committee. His two detailed reports to us since your last meeting have been presented to you through the Journals of November, 1927, and March, 1928, and his complete report for this fiscal year will doubtless be presented today. We commend his recommendations to your favorable consideration.

Preliminary Report

Editor and Executive Secretary

In our report of June 9, 1927, we reviewed the labors of 2½ years and recommended a course to be followed during the fiscal year now drawing to a close. At this writing, in the latter part of April, it is impossible to present a complete report of what this year's work will encompass, and we may later have to modify or add to some portions of this tentative report. We will, however, with as much accuracy as possible, indicate what has been done and what is in prospect for the immediate future.

(1) The Journal. Under authorization given at your last meeting, we have continued to develop the Journal upon the basis already established and have attempted to standardize its form and size. We are now running an average of about 72 pages of reading matter per month. The number of original articles has been increased to a monthly average of 8; this month we are publishing 9; and still the manuscripts awaiting publication increase steadily in number. Whereas we had 3 years ago to seek original matter, we now have more papers offered for publication than we can possibly accept without materially increasing the size of the Journal and, in consequence, the budget of expenditure. Of course this is progress of very gratifying character. In selecting or accepting papers we have constantly borne in mind that this Journal is primarily a medium for presentation of the work of our own members, and, secondly for publication of the work of New Jersey institutions and agencies. The recording of county organizational activities continues to be an important feature, and once again we would express appreciation of the coöperation received from nearly all of the county society reporters.

The special departments previously established have been maintained, and we have added one new section to cover the work of the newly organized Woman's Auxiliary. Through this column we endeavor to sustain a relationship between the auxiliaries themselves and a liaison between the auxiliaries and the medical societies with which they are associated.

Two of our departments have grown into commendable institutions: Medical Ethics, under Dr. John Hammond Bradshaw; and Medical Book Reviews, under direction of Dr. Royce Paddock. To both these gentlemen the Editor is greatly indebted. Paddock is furnishing something more than the usual type of review. Bradshaw's compact discourses have attracted widespread attention and letters have been received from numerous physicians, leaders of the profession in various parts of the country, praising his philosophizing and encouraging our efforts to uphold medical ethics.

One of the most important functions served by the Journal is that of being a medium of communication between the officers and members of the society. We have reason to believe that the Journal is now being read by a larger percentage of members than ever before, and we know that its value to the society is dependent largely on the number of regular readers it can secure. That member who reads his Journal regularly, and promptly upon receipt, will get far more out of his society membership than will the member who neglects this periodic performance.

We do not look upon the Journal as a perfect instrument, and we shall be glad to receive suggestions designed to effect improvement. The editorial work is becoming a fulltime job in itself and proper development of the Journal calls for more of the editor's time than his multitudinous duties have heretofore permitted.

(2) County Societies. It is a pleasure to report that the component county organizations are in a flourishing condition; possibly a better condition, on the whole, than at any previous time in their history. There are still a few weak spots but at present every one of the 21 county societies is functioning. During the year, we have personally visited every one of these organizations at least once; have attended 2 meetings in 2 counties and 4 meetings in our home county. We are inclined to attribute much of the local

activity and prosperity to the close association and deep interest shown by the State Society of officers during the past 4 years. Dr. Morrison has been constantly in touch with the county groups and his advice and guidance has been to them invaluable. President Conaway, excelling the praiseworthy example of his predecessors has during the first 10 months of his presidency visited all of the 21 county societies and addressed each upon the work of the state society. We are confident that these visits have been productive of good results and we earnestly recommend to his successor emulation of his example.

In the course of our own work in the counties we have furthered the antidiphtheria campaign, inaugurated the system devised by the American Red Cross and American Medical Association for medical aid in emergencies—adapting the plan to our state and county organizations—and have practically completed the first stage of organizing women's auxiliaries; active organizations having been constituted in 18 counties, 2 more being scheduled to accept formation during the month of May, and the last remaining county society having promised to consider the question at its next meeting in July. We had hoped to complete this task and report the state 100% organized ere the annual convention in June but delay of a month or so to bring in the final county will not materially detract from our ultimate success. The progress of these auxiliaries has been related from month to month by the Journal but the whole story will be more fully told, and we believe effectively demonstrated, by the women themselves at Atlantic City in June.

The question of periodic health examinations has not been preached so assiduously in the last as in the two immediately preceding years; partly because our time was fully occupied with other problems, and partly because we deemed it wise to suspend activity in that direction for a short time. As stated editorially in the April Journal, insofar as we can determine, a very small percentage of general practitioners has exhibited any real interest in caring for this kind of practice. It appears that comparatively few of them are prepared or preparing to make complete health examinations. Perhaps time will markedly alter the attitude of the family physician but at present the outlook in that direction is not encouraging. As a result of our observations we were led to make the following suggestion, in the editorial referred to: "Assuming that the vast majority of general practitioners are not going to consider this sort of practice worth their while—whether because of disinclination or because it is too small in amount, for each physician, to justify the additional trouble—and acknowledging that proper health examinations can best be made by individuals or groups of physicians who specialize in such work, may it not be well to induce some of our qualified members in each community, city, large town or county seat, to make a specialty of health examinations?"

Shortly after writing the above, we received from the Publicity Committee of the Morris County Medical Society a letter containing the following paragraph relative to a discussion of periodic health examinations by that eminently progressive society: "There is an increasing demand, on the part of the public, for health examinations. The medical profession is not meeting this demand. As a result, people are having health examinations made by agencies which are not controlled by physicians. These examinations should, if possible, be made by the family physi-

cian. If he is not equipped or is not willing to make them he should refer his patients to some physician in his locality who is willing and competent to make them."

Since at least 2 students of the problem in this state have arrived independently at the same solution, we respectfully submit that this is a question worthy of the attention of the State Society and we would suggest that it be referred to a special committee for consideration. We are frequently asked for advice about where to go for a health examination. Naturally, we have been urging every one to call upon his own family physician, but such advice is rather futile if said physician will not accept the application or, worse still, if, as occasionally happens, he ridicules the proposition. Some alternative must, therefore, be devised.

(3) Educational Work. Development of our program for education of the public in regard to medical matters has this year proceeded apace and the results are most heartening. It would be difficult to over-estimate the avidity with which intelligent laymen accept information relating to health conservation. Our previous happy experiences with men's clubs has been more than duplicated this year with women's clubs and school groups.

In addition to our visits to the county medical societies, we found time to personally address 13 lay organizations, whose attendance numbered a total of approximately 2500. Most of the public lecture work this past winter and spring has, however, been performed by the assistant you so kindly supplied.

In accordance with authorization voted at the last session of the House of Delegates, we engaged the services of an assistant to carry on under our direction. The society was fortunate in securing for this position Mrs. E. C. Taneyhill, a trained and experienced public speaker whose previous associations had been largely with medical men and institutions, and whose knowledge of educational methods covered a broad field; familiarity with medical ethics and with public health needs constitutes her an ideal liaison officer between the profession and the laity for the purpose of presenting the disease prevention program. She will in due time submit a detailed account of her recent experiences and observations and will, I hope, offer suggestions for the furtherance of our plans. For the present it may suffice to say that she has, in a most satisfactory manner, covered speaking engagements with 46 different organizations in 16 different counties; that she has been heartily endorsed everywhere and generally invited to pay a return visit; that she has developed new contacts not heretofore available to us; and that she has introduced a wealth of new ideas for promotion of our general program.

Mrs. Taneyhill's work has been of such high quality and so effective, and her conception of the needs and requirements of this work, and plans for meeting those conditions, are so wise and sound that we strongly recommend placing the entire public educational program in her capable hands. Proper performance of this work embodies a task more than large enough to occupy all the time of one person; indeed we concur in a suggestion of her's, adaptable to a plan of her devising, that opportunities can be found for an unlimited number of volunteers from among the society members, to speak before lay audiences in their own districts or neighboring territory.

Radio broadcasting and newspaper publication of health talks was resumed last winter and carried through successfully from December 2 to April 27, a period of 5 months during which weekly messages were issued. In the beginning our broadcasting was from Station WHAR through the courtesy of Seaside Hotel, Atlantic City, but when that Station terminated its service we were fortunate enough to secure a transfer to the facilities of Municipal Station WPG, Atlantic City. The series was inaugurated by the Editor and followed up by President Conaway, these first 2 speeches explaining the purpose of our state society in offering medical advice to the public in this manner. Then followed, periodically, talks devoted exclusively to the prevention of special diseases or to advocacy of periodic health examinations with a view to prolonging life. Insofar as possible we had these manuscripts prepared by members of this society who are recognized as competent to speak authoritatively upon special topics. For instance, Drs. English, Morrow and Pollak dealt with the prevention of tuberculosis; Quinn, with cancer; Lathrope with cardiac affections; McMahon, diabetes; McBride, reconstruction of those injured in industrial accidents; Disbrow with physical examinations. Generalized topics were handled by the Executive Secretary and his associate. Considering it inexpedient to carry on through the summer months we ended this series of talks in the last week of April, the understanding being, however, that we may start a new series in the autumn if you so desire.

To what extent broadcasting accomplishes its purpose one can only guess. That our talks have been heard by a good many people in this state cannot be doubted; and as for distance, we have received letters from listeners as far South as Brazil, as far West as California, as far North as Buffalo, New York, and as far East as Scotland. There are, however, many peculiarities about radio and it must be admitted that Atlantic City stations seem not to be obtainable by many residents of Northern New Jersey. In consequence of this, even if we continue to avail ourselves of the facilities so generously offered by WPG, we think it would be well to try to get on Station WOR. If any of our members have sufficient influence to secure for the society a regular place on the program of this Newark station they ought to do so. It will not be difficult to provide speakers for both stations and this educational work has great potential value for the public.

It has been our custom to mimeograph these talks and to distribute copies to 150 newspapers throughout the state, bearing a release date that permits publication by the press coincidentally with dissemination of the message through the air. We do not know exactly what percentage of these papers have published the material furnished but we do know that many have done so and that among them are some of the leading papers of the state. We have confirmation of this from many sources. One of the publicity agents of the New Jersey Tuberculosis League told us that publication of our 3 talks concerning the prevention of tuberculosis played an important part in their early diagnosis campaign.

We, therefore, recommend that this combined radio and newspaper publicity program be continued and, if possible, extended next year.

(4) Welfare Committee. The only portion of our work with this committee that has not al-

ready been presented to you through the Journal (see particularly the Journals of November, 1927, and March, 1928) has to do with the recent session of the General Assembly of New Jersey, and the annual report of the committee chairman will probably deal with that. We would like to say only that our relationship to that legislative body is now in a healthier condition than for some years past. Gradually, we have built up some degree of understanding so that communications from the state society are now given respectful consideration; we are, when personal contact is necessary, generally treated courteously; and, the influence of this organization in favor of or in opposition to any proposed legislation is possibly greater than ever before. We would like to take advantage of this opportunity to say that it is decidedly helpful to have several members of the medical profession among the Assembly Representatives and Senators. The mere presence of Drs. Newcomb and Woodruff and Baxter in the House this year gave us a feeling of additional security; and Drs. Cole and Carhart in the Senate again proved themselves staunch allies. Particularly does the society owe Senator Blase Cole an expression of thanks for faithful and earnest support of its interests and policies.

(5) Antidiphtheria Campaign. We have taken an active part in the campaign for abolition of diphtheria from this state and may report that under the chairmanship of Mr. Frank J. Osborne, Health Officer of East Orange, the state committee is making very definite progress. Time has been taken to effect a working organization, with special committees in each county under the leadership of members of this society, and very shortly an active immunization movement will be launched. Even now the preliminary publicity is being released.

(6) Tristate Medical Conference. This particular feature of our work, as reported heretofore, is producing excellent results. In the April Journal you will find a detailed report of proceedings of the last conference, held in New York City February 4, 1928; a report which embraces the clearest exposition we have seen of the problem involved in the matter of medicolegal expert testimony. Time spent in reading that report is well invested; the careful study given to every phase of the question and the suggestions offered as to correction of existing abuses make the report one of exceptional value.

These conferences, 3 per annum, of the representatives of the medical societies of the great states of New York, Pennsylvania and New Jersey, have proved of inestimable value to the medical profession in this large territory; not so much yet in the way of concrete developments as in the nature of a clearing house for opinion; a place where questions of vital import may be thoughtfully considered, where expert advice may be presented to a group of representatives well qualified to receive and digest it, and where possibly such problems may be solved in a manner that will be uniformly satisfactory to the physicians and to the citizens of these large states. We ask you to renew the appropriation to support New Jersey's part in these conferences.

(6) Public Relations. For several years past there has been a growing recognition of the fact that state medical societies must establish and maintain close relations with the public—especially with those "lay" groups, leagues,

clinics, foundations and welfare associations that in one way or another concern themselves with public health. We have evidenced our interest in the public health by the educational campaign for instructing the laity in regard to disease prevention; in that respect the New Jersey Medical Society is doing well and expecting to do better. But we must do still more; we must concern ourselves more deeply in the state, and in every county in the state, with the guidance and direction of forces we have ourselves let loose in the community. Do not overlook the fact that for some years we have been preaching that smallpox can be prevented, that typhoid and malaria constitute a disgrace upon any town, that tuberculosis is a preventable disease, that diphtheria can be wiped out, that cancer is curable if diagnosed while in an incipient stage.

What is the public response to all this? Is it not natural for the intelligent citizen to say—"You possess the knowledge whereby all this may today be accomplished; you have known how to do some of these things for years, some of them for many years, why then do these diseases continue to scourge our state." It will not suffice to answer that we are ready to eradicate some or all of these diseases when they want us to. They do want us to do so; they are showing that in many ways. They form these leagues to help us in dissemination of life-saving knowledge; they start new clinics for the practical application of what we have taught them theoretically; they offer money to meet the cost of caring for the "submerged half". Sometimes these lay organizations make mistakes—mistakes which generally speaking, grow out of overenthusiasm or too great haste in their desire to reach the goal. The important thing for us to consider is that we must be more (not less) closely associated with these welfare movements; that we must accept membership in them when it is offered; that we must help them to direct their energies along the right courses.

Our recommendation is that we must have an established, recognizable central headquarters from which to direct our educational program and to which we may attract all these forces for good, to the end that by harmonious action we can concentrate all the agencies and powers working for the abolition of disease. That, after all, is but expressing the ideal of our profession.

To anyone who looks upon this as Utopian, or who is too conservative to reach beyond the barriers that once encompassed the professional life, let me quote a statement made recently by the President of the Wisconsin Medical Society: "Practice of medicine of the past was more of an individualistic affair, while today the physician has not only his patients to serve, he must consider the welfare of the public. He is a public servant, and he must become more so with the passing of years. Better so than have the state supersede him." The public has not yet threatened to take things medical out of our hands, but it is restless in consequence of the slowness with which disease prevention proceeds. The public offers help; let us meet the situation, let us be real leaders in the good work we so often advocate by resolution.

In closing this report we wish to renew last year's expression of appreciation of the services of Miss Mahoney, our office secretary. The ever increasing amount of correspondence conducted through this office and the extra work entailed in preparation of newspaper material has been a growing burden for her to carry but she has accepted all this so will-

ingly and efficiently as to make it appear as if it were pleasure rather than labor. Her proficiency in general office tasks has been commented upon before but her ability to meet any emergency was demonstrated recently when she was suddenly called upon to substitute for us in broadcasting a health talk from WPG. It was then we discovered existence of an unexpected talent; her voice proved to be admirably adapted to the radio and her diction was perfect. It is a particular pleasure to record this because it assures the society that in the future development of its programs of public instruction it has in Mrs. Taneyhill and Miss Mahoney two very competent aides trained to handle every feature of the publicity work.

Current Events

NEW ORLEANS MEETING OF THE AMERICAN COLLEGE OF PHYSICIANS

Reported by W. Blair Stewart, M.D., F.A.C.P.
Atlantic City, N. J.

The American College of Physicians convened at Roosevelt Hotel, New Orleans, March 5 to 9, 1928. Dr. John H. Musser, General Chairman, with his fellow committeemen, provided for the comfort and entertainment of the 1000 or more visiting medical men and women, and presented a program of clinics, lectures and demonstrations unsurpassed by any medical meeting. The people of New Orleans showed that typical "Southern hospitality" that is known to them only. As stated in a local news editorial, "New Orleans became temporarily the medical capital of the United States. It knows as well as any other and better than most how to value the science and service that have put an end to the dreaded visitations of that age-old enemy, yellow fever, and have devised effective defenses against the attack of other disease that, in old days, periodically menaced the country's health and well-being. Thanks to medical science New Orleans has attained its present splendid health rating and material development that followed."

Among the many prominent invited guests of the College were Dr. Julius Bower, Professor of Medicine at the University of Vienna, and Dr. Aristides Agramonte, Havana, Cuba, the only surviving member of the American Yellow Fever Commission (appointed by Surg. Gen. Sternburg after the Spanish American War.) which convicted the mosquito as the carrier of yellow fever.

Every modern phase of "internal medicine" was presented in the clinics and forums. It will be impossible in a brief resumé to even tell the high lights of the various talks. Drs. G. L. Rowntree and George E. Brown, Rochester, Minn., told of their experiments with the "dye method" of blood volume estimation. The value placed on blood volume was considered more valuable than the morphologic changes alone.

The outstanding presentation of the session was by Dr. Maude Slye, Pathologist of Chicago University, who showed graphically her investigative work upon "Cancer and Heredity" as evolved from 67,000 individual studies upon mice in her laboratory. Cancer is not contagious. Hereditary defects and peculiarities were shown in various generations. Susceptibility to cancer was proved. If it can be done in mice why not in man? Two generations of proper mating in mice will eradicate cancer—why not in humans? Heredity is the most fundamental of all basic biologic facts. The encouragement of genetic consciousness, with the elimination of chronic ir-

ritations, may be the beginning of the elimination of cancer as a human plague. Coincident with the continuation of her studies, Dr. Slye proposed that the College of Physicians establish a "Foundation of Archives" where records of studied cases of cancer, individual and family groups can be tabulated. She offered the facilities of her laboratory and files for that purpose. Two generations of medical men, supplying records of their own studies of cancer sufferers and persons of cancer genealogies, can account for 4 generations of clinical subjects and thus, in a comparatively short time, working as an organized science, can accomplish the impossible in making records. Such studies are the genesis of preventive medicine. Acting upon Dr. Slye's suggestion, Dr. Frank Smithies, President of the College, announced that a committee of the College now in existence would coöperate in studying the situation.

Dr. Agramonte spoke at length on the historic side of yellow fever, its etiology, pathology and eradication. He stated that, since the findings of the Commission were published, nothing really new had developed in its study.

The symposium on the anemias was most interesting. Dr. W. W. Duke spoke on diagnosis and treatment of the anemias. Blood volume and hemoglobin computations are most valuable. It is difficult to accurately compute the blood volume of an individual as the red cells are found in so much greater number in the capillaries than the veins. Do not depend upon the relative color of the lips, mucous membranes and conjunctiva for color index. The palm of the hand is the most reliable index of color and changes least if held palm up at the level of the heart. Blood volume is always reduced in typhoid and debilitating diseases. Pernicious anemias are usually treated months or years too late. If treated in incipiency, before pernicious changes occur, it can often be aborted.

Dr. C. C. Sturgis reviewed liver fractional feeding and spoke of the best liver extract as yellowish in color, a granular powder, soluble in water, and much to be preferred to giving 1½ lb. of liver. Its use rapidly shows an increase in reticulated cells. Best results follow in 6 to 8 weeks and are sustained as long as the liver or extract are continued.

The symposium of "Tuberculosis" was presented by Drs. Charles L. Minor, Ashville; F. M. Pottenger, Monrovia; Gerald Webb, Colorado Springs; Robert S. Berghoff, Chicago; John W. Flynn, Prescott, and Albert K. K. Krause, Baltimore. Tuberculin was a tremendous step forward but it has not been to any degree the remedy that was expected. The factors of hygiene and dietetics were featured but the one outstanding therapeutic remedy indorsed by all was rest. We can not measure the constitutional and moral resistance of our patients but we can estimate it reasonably. The mentality of the patient often controls progress of the case. Artificial pneumothorax, practiced since 1910, is an essential method to our treatment of many selected cases. Heliotherapy in lung cases is not advised. Quartz light is desirable when there is a lack of available sunshine, but must be carefully and accurately used. Lying on the involved side puts the lung at rest. This postural treatment should be studied and applied as contrasted to artificial pneumothorax. In bilateral cases of apical involvement, Webb applies 2 oz. or heavier shot bags to make the lower part of the lungs do the work. Use simple methods first and follow with the more radical if necessary.

Berghoff stated that intestinal tuberculosis is mostly secondary to pulmonary involvement, but may be wholly primary. Pain is usually absent and is not an index, even though there may be a diffuse abdominal tenderness. Temperature is not characteristic but there is loss of appetite and little vomiting. Must be differentiated from amebic dysentery, mucous colitis and malignancy. Cures are quite frequent.

Dr. Walter M. Simpson, of Dayton, reported 45 cases of tuleremia, a disease known for only about 25 years. Real experimental work has been done only in recent years and the greatest drawback with laboratory experimentors has been that about 3 of every 5 have contracted the disease of animals communicated among each other, and later from animals to man. The specific organism was found by Edward Francis, of the United States Public Health Service. Discovered in ground-squirrels and rodents and transmitted by the bite of the deer fly, Horn fly, fleas, ticks or through scratches or abrasions in the skin. It is variously known as Deer-Fly fever, O'Haras disease, and tuleremia. Improperly cooked meat of rabbits that are infected may transmit the disease, and often does. Agglutinins have been found in the blood of patients after 18 years and the statement was made that they would last for life. It is a very common disease in certain sections and has been found recently in New Jersey (see April Journal, page 267). The incubation period is 1 to 5 days but most cases develop in 2 or 3 days. It appears as: (1) A seroglandular type, with papillae and runs its course in 2 to 5 months; (2) oculoglandular; (3) glandular; (4) typhoidal type. No specific treatment is now known. The attacks are not fatal per se. It is most common in those who handle and use rabbits and rodents.

The symposiums on the heart and on epilepsy were very interesting and presented many facts and some new instruments. The apparent increased number of cardiac deaths demands closer study. Endocrines as related to epilepsy were discussed, but without positive conclusion. Strict diet, aside from drugs, offers best present method of treatment.

The symposium of 4 papers on the infectious diseases was full of interest and the progress made in serums discussed, but specific methods are still sought. Diabetes was presented by Drs. Anthony Bassler (N. Y.), Frederick M. Allen (N. J.), A. A. Harold (Shreveport) and W. H. Olmstead (St. Louis). Current literature was reviewed and advances in diet discussed. Insulin and new remedies were reviewed. Much of this has been published and will not be given here. Insulin which has been accepted as our most valuable remedy is not a specific and does not cure. Avoid the use of insulin as long as possible except in young children. There is no absolute fixed rule for its use and it can be dangerous. To give insulin with meals is a fallacy. Give it before breakfast, about noon-time and about bedtime, for safest and best effects. These periods will give less hypoglycemia. Every case must be studied individually as to diet and the total calories computed to keep up strength and hold blood sugar within safe limits. The initial study should always be done in an approved hospital. New remedies were presented only to be condemned or to be used with utmost caution. The new German remedy—myrtilin—is given by mouth but seems to be of service only in mildest cases. It is not insulin and is not a substitute for it. In spite of insulin, the diabetic death rate remains at the old level. Synthaline and

neo-synthaline usually cause gastro-intestinal irritation and must be used with caution, if used at all. Much general investigative work has been done on diabetes and we are hoping some method will develop whereby the disease may be conquered in its incipency or reduced to a minimum.

At the Cleveland meeting of the College we were shown a method of treating paresis with parasites with a fair degree of success. At this session, Dr. C. S. Hollbrook (New Orleans), of the Taure Infirmary, demonstrated a method and showed a case where the organisms of Rat Bite Fever (*Spirocheta morsua muris*) were injected into the paretic to produce the fever in man. His results were rather startling and favorable but enough cases have not been studied to give positive results.

Opportunity was given members to visit the Marine Hospital, and Carville Leprasorium where leprosy in its varied forms was shown and the methods of promising specific medication outlined. Over 75 members of the College sailed for Havana, Panama City and Port Limon after the meeting to attend clinics and demonstration of tropical diseases. Dr. Agramonte conducted the clinics in Havana.

Dr. John H. Musser, New Orleans, is the new President-Elect. Dr. Charles F. Martin, Montreal, is now the Acting President of the College. The next place of meeting will be announced in May.

SHOULD PUBLIC HEALTH BOARDS BE COMPOSED OF LAYMEN OR OF PHYSICIANS

(Editorial in California and Western Medicine, August, 1927.)

The physician who officiates as a public health officer must deal with disease from a somewhat different standpoint than that of the private physician. The private physician is called in by a citizen who requests professional care, and who hopes for or expects cure of this, that or the other disease which is interfering with his, the citizen's, usefulness or comfort. The public health physician, on the other hand, has his work assigned to him by many physicians, usually a community, acting through its executive officials.

While the work of the private physician deals largely with his individual patients, the work of the public health officer physician has particularly to do with the general health interests of all citizens in his district, and deals especially with sanitary engineering, bacteriologic, epidemiologic and social service activities.

When a community's population runs into the thousands and thousands, such a public health officer physician finds it convenient to have an advisory board with which he can consult on matters of fundamental policy in his department. He is, as a matter of fact, a sort of an executive with a cabinet, only the cabinet members are usually not of his own choosing. Such health boards or cabinets, came into existence in the beginning, because public health officials and the communities alike felt that on certain matters in which the interests of citizens at large were apt to be affected, it would not be a bad plan to have a group rather than a single man's viewpoint. When the executive officer and the advisory board members are all high type men, the results obtained in a department so managed, should be better than if the entire responsibility was lodged on the shoulders of one individual.

In the past, many of such advisory health

boards have been composed entirely of physicians; or if not, then usually with a majority of physicians composing the membership. With the advent of new schools of medicine, the distribution has sometimes included physicians of different schools of the healing art. The work which has been done by such conjoint boards has in many instances been very creditable.

It occasioned some surprise, therefore, when a Los Angeles newspaper recently stated that its city health officer had gone on record as favoring a health board of five laymen to be appointed by the mayor, to act as his immediate advisors on matters of health and sanitation; with a health advisory board of 12 physicians who would presumably give more remote advice to this regular health board of laymen. In the last analysis in such a plan, the lay health board, in conjunction with the health officer, would have the final or real authority as to what should or should not be done in solving the community health problems.

The institution of such a lay health board would certainly seem to be somewhat of an innovation. Whether it would be an innovation for good or for ill, would be dependent largely upon the character, capacity and mutual good will of the men involved, namely, the health officer, the members of the lay health board of 5, and of the medical advisory board of 12. Whether this medical advisory board was to be divided among the so-called regulars, homeopaths, eclectics, chiropractors, naturopaths and others, to add to the further complications of the remote advice, was not stated.

This editorial comment is given because this proposed change seems to mark a somewhat important departure in methods of procedure as regards public health office management in a large city. Whether or not the proposed system is one that would ultimately work out as a desirable change generally, is however, a question. Our experience with advisory boards that have no real authority, has been that they are largely figure-head propositions. If such a medical advisory board should become a figure-head proposition, would it be to the advantage of organized medicine, as represented by ethical practitioners, to have much to do with the system? Should we as ethical physicians, permit the name of our particular group of the healing art to bear part of the responsibility, or at least receive the onus of mistakes of procedure, when we are not permitted to have any of the authority that would permit us to promulgate and work for the execution of those public health measures in which, because of our training, we as a group believe? These and other questions of similar import come to our mind in a consideration of this proposed innovation. It will be interesting to note how the plan works out, if it is put into operation.

DISEASES OF THE NASAL ACCESSORY SINUSES

(Clinton A. Burrows, Los Angeles, in California and Western Medicine, August, 1927.)

The increased interest in the nasal accessory sinuses that has developed in recent years is continually bringing to light new data in reference to them. King, in the March issue of the Journal of Otolaryngology, points out the fact that chronic pathologic changes may be present in the antra without marked signs in the nose. That undoubtedly is true; at least, there are times during the course of a chronic maxillary sinus involvement, when no suspicion of the

pathologic changes present would be obtained by inspection of the nasal cavities. This is also true in chronic involvement of the other sinuses, except, perhaps, the ethmoid cells. If this observation is correct, it is apparent that negative findings on inspection of the nasal cavities are insufficient to rule out pathologic changes of the sinuses. On the other hand, it is also true that marked swelling of the turbinates and profuse mucous or mucopurulent discharge may be present, giving the intranasal appearance of accessory sinus-involvement, when x-rays will show them very clear. It is difficult to understand how the sinuses can all be so clear when the intranasal pathology is so marked, yet it is quite frequently so, especially in acute cases. Again, transillumination and x-rays will show the antrums very cloudy, when irrigation will return no discharge.

Just why all this cloudiness in the x-ray picture of some sinuses is a question. It may be due to thickened membrane following an old chronic sinusitis or the bone of the sinus wall becoming more dense as the result of some long continued but now quiescent inflammatory process that has healed.

The maxillary sinuses are all fairly uniform in size. The frontal sinuses, however, vary greatly in size and shape, not only in different individuals, but on the two sides. For this reason, transillumination is quite unsatisfactory with these sinuses, unless both frontals transilluminate clearly. The maxillary sinuses transilluminate well.

Transillumination of the ethmoids is very unsatisfactory, and of the sphenoids is out of the question.

We believe that the frontal and maxillary sinuses that transilluminate clearly are normal and all others are suspicious.

Transillumination might well be done as a routine, and then many unsuspected maxillary and frontal sinus cases will be picked up. Only too frequently are headache, eye pain, hay fever, asthma, pain in the ears, and "catarrh" caused by sinus involvement.

Communications

Physician's Art Exhibit

(Letter received from one of our members)

At the Second Annual Physician's Art Exhibit, held at the New York Academy of Medicine this month, Dr. C. D. Martinetti, of Orange, represented New Jersey with 4 landscapes in oil; the only other contributor from our state being Dr. Edgar Burke, of Jersey City, with a display of ducks admirably carved out of wood.

Attendance at the exhibition was all that could be desired and the pleasure shown by visitors on examining this most creditable display of plastic and graphic arts was quite unmistakable.

It would be most interesting to see whether a similar show could not be arranged in Newark next year for there must surely be enough physicians in this state interested in art in its various forms to make a very good showing.

Prosecutions by State Board of Medical Examiners (Letter from Dr. Chas. B. Kelley, Secretary, State Board of Medical Examiners)

The following is a list of the Board's prosecutions since our last report:

On Sept. 28, 1927, John P. Fisher, (rheumatism specialist) of Clifton, New Jersey, pleaded guilty.

to practicing medicine without a license, in the Paterson District Court and paid the penalty.

At a meeting of the Board on January 19, the license of Bertha Nebel to practice midwifery was revoked.

On Feb. 2, 1928, Joseph N. Lisser and Fred S. Faust, unlicensed chiropractors, pleaded guilty in the Court of Common Pleas, Mount Holly, New Jersey, to a charge of practicing medicine without a license and paid the penalty.

On Feb. 9, 1928, Susie Pallay, of Carteret, New Jersey, was found guilty of practicing midwifery without a license.

On Feb. 23, 1928, Frank Rentusky, (rheumatism specialist), pleaded guilty in the Elizabeth District Court to a charge of practicing medicine without a license. As he had spent one week in jail awaiting trial, he was sentenced to one additional hour in jail.

On Feb. 29, 1928, Gray Blynn, an unlicensed physician, pleaded guilty in the Paterson District Court and paid the penalty. On the same date in the Paterson District Court, William Forte Palmigiano was convicted of practicing medicine without a license.

On March 6, 1928, Richard Blechschmidt, of Jersey City, a licensed chiropractor, was tried on a charge of practicing medicine without a license and a judgment entered for the penalty and costs. We have been served with a notice that the attorney intends to apply for a writ of certiorari.

On March 9, 1928, Harry Schoenhaut, who posed as "Professor Caballah", was found guilty in the District Court of Trenton, New Jersey, of practicing medicine without a license. (See ad below).

On March 6, 1928, Edward Barden, of Jersey City, an unlicensed chiropractor, paid the penalty of practicing medicine without a license.

On March 20, 1928, Joseph Struck, an herbalist, of Irvington, New Jersey, pleaded guilty of practicing medicine without a license.

On March 27, 1928, Julius Levine, a druggist of Dover, New Jersey, paid the penalty of practicing medicine without a license.

The following advertisement appeared in the State Gazette, Trenton, Jan. 30, 1928:

Miracle Man to Visit Trenton

"Professor H. Caballah, the noted Austrian psychotherapist and scientist now making a tour of the United States on his ninth trip around the world, will be in Trenton Wednesday, February 1, for a stay of a few days. By his seemingly miraculous yet successful treatments Prof. Caballah is known in most European countries as the "Miracle Man".

During his stay in New York he treated hundreds of people and in about 80% of the cases the patients were restored to practically their normal condition, sometimes in a single treatment.

Professor Caballah treats without the aid of medicine or drugs such ailments as: Paralysis, rheumatism, asthma, high blood pressure, neuritis, hysteria, insanity, epilepsy, and all nervous disorders. He will give free treatments all day Wednesday. He will have his office at the Trenton House, office hours 9:30 a. m. to 2:30 and 7 to 9 p. m.

Scientists, psychologists, skeptics, and critics are specially invited. As the professors stay is limited to just a few days this will be your only opportunity to visit this worker of miracles."

In addition we submit the full text of 2 very important decisions recently rendered by the New Jersey Supreme Court.

No. 206 October Term, 1927.

NEW JERSEY SUPREME COURT

State Board of Medical Examiners of New Jersey,		Prosecutor,
		vs.
Cometis De Young,		Respondent.

Submitted October 14th, 1927; decided January 27th, 1928.

On writ of certiorari.

Before Justices Trenchard, Kalisch and Katzenbach.

For the prosecutor: Edward L. Katzenbach, Attorney General, and Grover C. Richman, Esq.,

For the respondent: Elmer W. Romine, Esq., and Alexander MacLeod, Esq.,

PER CURIAM:

This case is before this court by the allowance of a writ of certiorari directed to the District Court of the City of Passaic. The writ brings up for review proceedings instituted by the State Board of Medical Examiners of New Jersey against Cometis De Young for a violation of section 10 of an act entitled "An act to Regulate the Practice of Medicine and Surgery, to License Physicians and Surgeons and to punish persons violating the Provisions thereof," approved May 22, 1894. This section was amended by Chapter 271 of the Laws of 1915 and Chapter 221 of the Laws of 1921. It provides that any person practicing medicine or surgery without first having obtained and filed the license provided by the act shall be liable to a penalty of \$200. The suit in the instant case was for \$500 as De Young had been previously found guilty of the same offense and for a second offense, if guilty, the act makes the penalty \$500.

The complaint was made by a member of the State Board of Medical Examiners. It alleged that Cometis De Young had violated said section 10. The usual warrant was issued on the complaint. A trial was had before the Passaic District Court. It was admitted that De Young was a duly licensed osteopathic physician. Those who were sworn in behalf of the State Board testified that De Young had a large residence. In the window there was displayed a sign reading "Electric Treatments". In large letters appeared the words "Doctor De Young". In smaller letters appeared the words "Osteopathic Physician and Surgeon". There was also another sign reading "Dr. De Young". A sign reading "Dr. De Young's Health Office" was placed under the bay window of the residence. A sign hung over the porch reading "Dr. De Young". The testimony of one witness was to the effect that when she called De Young asked her what her trouble was. She told him she had pain in her stomach after eating. He asked if she was constipated, and when told she was, he said that the ascending colon might not be working and that the food lay there and caused pain and gas. De Young told the witness when she went home to take the juice of two sour oranges, rhubarb and soda, and to eat no dinner and no breakfast, and to come to his office in the morning at 9 o'clock, when he would give her a glass of buttermilk and use the fluoroscope on her. The witness returned in the morning at the appointed

time. De Young took her upstairs in a large room where there was an electric instrument. She removed some of her clothing and stood in front of a frame. De Young turned the lights out. He then turned the current of an electric machine on. It threw a light so he could see the organs of her body. He said that her heart was overworked, liver enlarged and stomach dilated. He took her blood pressure and asked for a specimen of her urine, for analysis. He afterward reported the result of the analysis. Electric treatments were also given her by a nurse under the defendant's direction. Four other witnesses for the State Board testified substantially to the same effect.

At the conclusion of the case the trial court dismissed the complaint on the ground that as the defendant was licensed to practice osteopathy he had the right to give electric treatments. The question before us for decision is whether or not an osteopath who gives electric treatments to his patients is violating the Medical Act. In the case of State Board of Medical Examiners v. Lezenby, 1 Misc. Rep. 20, it was found that the giving of electric treatments was a violation of the State Medical Act. It does not appear in this case as to whether or not Lezenby was an osteopathic physician. The case is, however, authority to the effect that electric treatments constitute a violation of the Medical Act. We cannot see that under the provisions of the Medical Act it can make any difference by whom the electric treatments were given, if not given by a physician duly licensed to practice medicine and surgery under the Medical Act, approved May 22, 1894, and its amendments and supplements.

The contention of the defendant is that one who obtains a license to practice osteopathy has by the terms of that Act (P. L. 1913, P. 388) and its supplements, studied such subjects as would qualify him to give electric treatments. This argument is perhaps persuasive as to why osteopaths should by law be permitted to give electric treatments, but unsound as to their having under the statutes pertaining to the practice of osteopathy the legal right to do so. Under the law the osteopath is limited in his treatment to the manipulation of the human body by hand so as to bring all parts thereof into the proper position. With reference to the giving of electric treatments we feel that we are controlled by the case of State Board vs. Lezenby.

There was also evidence that the defendant used the letters "Dr." in connection with his name and in some places upon his residence without qualification. By section 8 of the Medical Act any person is regarded as practicing medicine and surgery who shall use the letters "Dr." in connection with his name and hold himself out as being able to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity or physical condition, or who shall either offer or undertake by any means or method to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition. Under this branch of the case the testimony seems to us to have warranted a conviction, as the defendant did use the letters "Dr." in connection with his name and did offer and undertake by a method to treat a physical condition.

The judgment of the District Court of the City of Passaic is reversed.

No. 283, October Term, 1927.

NEW JERSEY SUPREME COURT

State Board of Medical
Examiners,
Plaintiff,
Prosecutor in Certiorari,
vs.
Henry P. Livesey,
Defendant,
Respondent in Certiorari.

Submitted November 4, 1927; Decided February 8, 1928.

On Certiorari, etc.

Before Justices Trenchard, Kalisch and Katzenbach.

For the respondent in certiorari, Elmer W. Romine.

For the prosecutor in certiorari, Grover C. Richman and Edward L. Katzenbach, Attorney General.

PER CURIAM:

The defendant in this case was charged with the practice of medicine and surgery without a license. The case was tried before the First District Court of Jersey City and the court gave judgment for the defendant. The State Board sued out this writ to review that judgment.

At the trial it appeared that the defendant was a licensed chiropractor; that his place of business was in Arlington; that he had a reception room, a treating room and an electrical machine; that he prescribed a diet for various people, who testified as witnesses, and gave them salts to take inwardly; that he gave them oxy-christine into which, according to the witnesses, but denied by him, he said that he had put some other ingredients; that he also gave the witnesses electrical treatments using an electric vibrator attached to an electric machine; that he sometimes used an electric lamp which he held close to the various parts of the body until they became very warm, and that the witnesses paid him for these treatments.

Whether or not the defendant prescribed or gave medicines was manifestly in dispute in the evidence, and the judgment, therefore, cannot be disturbed on that ground. But beyond dispute he did give electrical treatments for various ailments. So far as this court is concerned we are bound to hold that in so doing he exceeded his authority under the statute. See State Board of Medical Examiners vs. Lezenby, 1 N. J. Mis. Rep. 20, in which it was held that the giving of electrical treatments was a violation of the State Medical Act, and a judgment in favor of the accused was reversed.

In the case at bar the defendant seeks to evade the effect of that decision by calling attention to the provision of the Medical Act as amended by P. L. 1921, p. 707, which exempts therefrom any person resident of this state who has been continuously engaged in giving treatment by electricity herein during the past 14 years; provided that said person has graduated from a legally incorporated electrotherapeutic school in good standing."

We think the answer to the contention of the accused that he is excused by virtue of the language quoted is that, as we read it, there is no evidence in this case that he *continuously* was engaged in giving treatment by electricity *in this state* during the past 14 years, and certainly none that he was such a graduate as the statute described.

The judgment will be reversed and the case remitted for a new trial.

The American Association for the Study of Goiter, consists of Internists, Pathologists and Radiologists, as well as Surgeons, will hold their Fifth Annual Conference on Goiter, in Denver, Colorado, June 18, 19 and 20.

Several men from foreign countries have signified their intention of attending. Professor Breitenner, of the Von Eiselberg Clinic, Vienna, and Professor Albert Koehler of Berne, Switzerland, have accepted places upon the program.

Addresses and discussions on prophylaxis, medical treatment, endemic goiter and cretinism from the public standpoint, are on the program for the first afternoon.

Pathology and various phases of surgical treatment will be considered the last 2 afternoons.

All members of State Medical Societies are invited to attend.

Dr. Gordon S. Fahrni, of Winnipeg, Canada, is the President, and Dr. Kerwin Kinard, of Kansas City, is Vice-President.

Medical Book Review

(Royce Paddock, M.D., Department Director)

ESSAYS IN THE HISTORY OF MEDICINE. Karl Sudhoff, Professor of History of Medicine in the University of Leipzig, 1895-1924. Translated by various hands, and edited by F. H. Garrison, M.D., Lt. Col., Medical Corps, U. S. Army. New York. The Medical Life Press, 1926.

Sudhoff's essays on the history of medicine, collected from his 30 years of intensive work, are published as Vol. III of the Library of Medical History. This plain statement, however, will not suffice. The book suggests so much that it is difficult to grasp. The author humbly likens his work to the digging and smelting of iron ore. Perhaps the work resembles more the few grams of radium recovered by finer yet more laborious methods from the ton of pitchblende. That this comparison is not extravagant is attested by the splendid achievement of omission of all the dry historic dust which so readily accumulates and obscures work of the past. Dr. Sudhoff has purposely omitted all the technical paraphernalia of his calling in order to arouse in the reader the fullest appreciation of findings which shine brilliantly from these pages.

What these findings are, is left to the reader, and not necessarily the medical reader, for a great many who study the general history of mankind will want to know its contents. In the first 3 sketches the author gives out his own ideas, and in no uncertain tones states the following as his convictions: Medical history is not a set ornament, but something to be sought with a spade. Hippocrates, our catchword where history is mentioned, was not the beginning. Our medical theories have suffered countless changes and followed cycles from the first, being discovered and rediscovered in the continual battle of rival factions. In place of the usual mummied likeness which is represented to our minds by the two words, Sudhoff holds up a sturdy living form to our view.

Those who look for a continued story of the development of medicine will not find it here. In fact, the author plainly states that no continuous account is as yet possible. His work is a series of essays or bold attempts at construction on slight but carefully worked foundations, and occasionally a flight of trained fancy, the shrewd guess of the

expert. To many it may seem that, in some portions, the gain has not been worth the trouble taken. To these, certain pages will appeal. In "The Hygienic Idea" in world history, and in "Epidemiologic Rules of the Past", essays which summarize some of the preventive medicine of ancient and medieval history, they will find matter thoroughly "original" for our practice today. Through the whole book, however, material abounds to furnish backgrounds for every medical subject.

In regard to the general aim of medical history, from the doctor's viewpoint, Sudhoff asks—"Does not the physician of today, weighted down, as he is, like a beast of burden, with the oppressive mass of fact he deals with, does he not seem one-sided in comparison with other university graduates? Does he not display, to his disadvantage, a certain lack of broad general culture that makes it difficult, except in rare cases, for him to take the social position that should be his natural right, and which would otherwise open out to him the possibility of receiving full recognition every where for his endless, many-sided and momentous labors for the common good? Is not this undeniable deficiency only too often apparent through the fact that, in the great world outside, medical science no longer enjoys the high consideration which was undoubtedly its portion in the distant past?"

Indeed, even the exaggerated evaluation of so-called popular medicine which now obtains is a feature more and more significant of this diminished estate of medical science, due to a certain isolation which seems to go on increasing as medicine is more and more split up into specialties. In common with other theoretic sciences upon which medicine is based, the history of medicine has a special call to equalize this imbalance by winding itself like a ribbon around the several scientific and medical disciplines via the demonstration of their origin from a single root, and by cultivating a common interest in their glorious past."

We learn, from the biographic sketch preceding the essays, that Professor Sudhoff commenced medical practice in 1878 in Frankfurt-am-Main, his birthplace. He practiced medicine for 28 years before he was offered the chair of medical history at the University of Leipzig, following a bequest to the university for the study of this subject. At this time his publications in his self-taught subject had thus brought him such renown. He left his practice to begin the strenuous labor which has brought him to his present position after 30 years. The book will indicate clearly to all his natural gifts. As a translation, one can guess that his thought has lost little through the devoted attentions of his friends and admirers here.

The Woman's Auxiliary

REASONS FOR EXISTENCE

Inasmuch as not all members of the State Medical Society are yet fully informed as to the reasons for establishing a Woman's Auxiliary, and as quite a fair percentage of the auxiliary members still ask what there is for them to do, we continue to present suggestions that may help answer questions and dissolve doubts. In this connection we reproduce part of an article by Mrs. G. Henry Mundt, in the Illinois Medical Journal, December, 1927, which our readers should find interesting:

"For some time there has been a feeling among some of the leaders of the Illinois State Medical Society that a Woman's Auxiliary would be a very fine thing. On the other hand, some

have felt that it might be treading upon very dangerous ground, fearing that a Woman's Auxiliary might go off at a tangent and combat some of the ideas that have been paramount in the society for many years.

I realize that this could easily be done, so the point must be and is being stressed that the Auxiliary must be subservient to the County or State Medical Society and must only act at the suggestion of or with the approval of these societies. Before taking up any piece of work the state president should confer with the officers of the State Medical Society or the county chairman with the county officers. The National Auxiliary aims to suggest but does not expect to dictate.

We are aware that some states are in advance of others and what might be suggested for one state could not be suggested for another. Some states are ahead of others in trying out measures and have proved to their own satisfaction whether they are right or wrong. We appreciate that the Illinois State Medical Society has been in the forefront for its advocacy of measures which have subsequently proven to be of great service and likewise it has opposed many measures which were advocated by other organizations and later proved to be wrong. Among these I might mention the Harrison Narcotic Act, the Sheppard-Towner Act, and State Medicine.

Undoubtedly it is this cautiousness which has kept a Woman's Auxiliary to the Illinois State Medical Society from being organized until this time. There are 27 states organized and operating successfully. The first auxiliary was organized in Texas in 1917. The National Auxiliary came into existence in 1922. The State of New York is now being organized.

I believe that we doctors' wives organized as an Auxiliary can be of real service to the medical profession, acting as a medium between the profession and the laity, establishing a better understanding and closer relationship.

Medicine has never taken any definite stand in its own behalf, but I believe it is beginning to appreciate that it should and must. The Woman's Auxiliary gives us a real opportunity to serve the profession and incidentally our own husbands in this very thing.

The Auxiliary will expect to appreciate the viewpoint of organized medicine and assist in conveying this to the public. Women's organizations can do much toward shaping public sentiment and changing the attitude of the public on different health matters. Certain legislative matters could be espoused by a Woman's Auxiliary and great effect could be had upon legislators. We all know the pressure that can be brought to bear upon legislators by women's organizations.

Some women will say that they have no time for another organization, but to those I can say that much of the work can be done through the clubs to which they already belong. We can see that speakers from the Speakers' Bureau conducted by the Educational Committee of the Illinois State Medical Society are brought before our clubs and the viewpoints of organized medicine presented in this way. The bureau is doing a wonderful piece of work and we can assist greatly in this. It might be well if some of us doctors' wives were enlightened a little more as to some of the health problems of today by having these same speakers come to our auxiliary meetings to talk to us. We can see that our

club bulletins do not allow the advertisements of drugless healers, quacks, etc. In one state the bulletin of the Federated Woman's Clubs was filled with such advertisements until cleared of such by the Woman's Auxiliary. We can see that the office of chairman of public health is filled by a physician's wife and that it is active when need be. This is sometimes filled by a Christian Scientist.

It is one of the aims of the auxiliary to send out readable information regarding bills pertaining to medicine which are to come before the legislature. I am sure that each member will feel it is one of her duties to read whatever the auxiliary sends to her, while friend husband, unless vitally interested in medical politics, is sometimes too busy and sometimes too negligent to read literature that is sent to him from the society. Women have more time to take up some of these matters of importance in which the doctor is interested but for which he feels he cannot afford to spend the time.

I feel that we wives owe an allegiance to the one who makes it possible for us to have time for other club activities, but if the doctors themselves cannot see any reason for a Woman's Auxiliary their wives cannot be expected to, for they are too busy with other club activities to bother about things concerning their husband's profession. However, I am sure that they would be glad to be of assistance if they knew how to be, so the doctors must see the need for it before the wives will become interested. I feel certain that the only reason why any doctor is not already interested in the Auxiliary is because he has not taken the time to consider the possibilities of such an organization.

There is the social side, too, which is of great value. I am told that in some places there is a happy relationship between physicians' families that has never existed before, due to the work of the Auxiliary."

Atlantic County

Mrs. Lawrence A. Wilson, Secretary

The Woman's Auxiliary to the Atlantic County Medical Society met at the Chalfonte Hotel, Friday, April 13.

We had a very interesting meeting and in spite of its being Friday and the thirteenth there were 14 members present and we had the pleasure of welcoming Mrs. Axilrod and Mrs. Kilduffe as new members.

It was voted that we invite Mrs. Taneyhill to speak at the next meeting and that we have a "reciprocity night", inviting all the Club Presidents of Atlantic City to hear the address.

In response to our State President's request we have contributed our bit and look forward to the convention with expectancy.

Mrs. Walter Stewart suggested that we have group talks on children, their guidance, etc. This information is taken from the magazine "Children", the only one of its kind published. Mrs. Stewart said the magazine pointed out how often parents put the wrong things in the hands of a child for example, a paint brush in the hands of a small athlete, or would-be active child; through a wrong beginning it may take a life time for the child to find its vocation.

After the routine business we had a pleasant evening at cards. Prizes were given to those holding the highest score.

Hudson County

Reported by Mrs. Harry J. Perlberg

The monthly meeting of the Woman's Auxiliary to the Hudson County Medical Society was held at the new Y. W. C. A. building in Jersey City, Friday, March 16.

Mrs. E. C. Taneyhill, the representative of the State Medical Society, was the speaker of the day. Preceding this talk, Mrs. Taneyhill was entertained at luncheon by the officers of the society. Her address to the members and guests of the society stressed the importance of periodic health examinations and urged support of the campaign for immunization against diphtheria.

Open discussion of these health questions was followed by a musicale, and later by the serving of refreshments. Mrs. Reid, of the Y. W. C. A., escorted the guests on a tour of inspection of the new building.

The first annual Flag Day was discussed and decision made to spend the day of May 22 at one of the country clubs, definite arrangements to be decided upon at the next regular meeting, May 18.

Passaic County

Reported by Mrs. William A. Dwyer

The regular meeting of the Woman's Auxiliary to the Passaic County Medical Society was held at the Health Center, in Paterson, on April 12. Mrs. Schultz, First Vice-President, occupied the Chair in the absence of President Tuers, whose daughter was critically ill in Washington, D. C.

A very interesting lecture was given by Dr. Potter, head of the new State Home for Girls, located in Passaic County. In the course of her talk, Dr. Potter urged the women to take an active interest in this worthy work and extended an invitation to all members of the auxiliary to visit this institution and become acquainted with what the state is doing for these unfortunate girls.

The presiding officer urged that as many members as possible shall attend the Annual Convention of the State Medical Society, in Atlantic City, June 6 to 9.

The following changes in the county auxiliary constitution were adopted:

Article IV, Section (d). No member shall be eligible for election to office who is not present at the time of election. (e) The tenure of office shall be 1 year, without the privilege of immediate succession except in case of secretary and treasurer. (f) The first vice-president shall be president-elect.

Article V, Section (a). The Annual Meeting shall be in October. (b) Meetings shall be held during the months of October, January, March and May.

Article XI. The fiscal year of this society shall begin on January 1 and the annual dues shall be payable in advance on that date.

Somerset County

Reported by Mrs. Dan S. Renner

On Thursday and Friday, April 12 and 13, Mrs. E. C. Taneyhill, Assistant Educational Secretary of the Medical Society of New Jersey, gave interesting and instructive talks to children of the rural schools of Harlingen, Skillman and Blawenburg, explaining to them how they might make

a prolonged, nonstop flight through life in healthy condition if they would make use of simple measures to prevent interruption by diseases that so commonly interfere with life's passage. Using Colonel Lindbergh as an illustration, applicable to this theory, she attributed much of his success in long distance flying to the fact that he always keeps himself and his machine in absolutely perfect working condition.

On Thursday evening, April 12, Mrs. Taneyhill addressed the Parent-Teacher's Association of these districts on the importance of periodic health examinations, which help to prevent those degenerative diseases that cause the majority of deaths among people above the age of 40, and urged that parents who do not care to avail themselves of these examinations should at least see to it that their children are given the opportunity to live their lives unhampered by the effects of diseases that are known to be preventable.

Warren County

Reported by Dr. F. A. Shimer

The Woman's Auxiliary to the Warren County Medical Society held its second meeting April 10, at Phillipsburg.

After an address by Mrs. E. C. Taneyhill, speaking of the work that auxiliaries might perform, the election of officers was held and resulted as follows: President, Mrs. Lawrence H. Bloom, Phillipsburg; First Vice-President, Mrs. Paul Drake, Phillipsburg; Second Vice-President, Mrs. G. West, Phillipsburg; Secretary, Mrs. G. H. Bloom, Phillipsburg; Treasurer, Mrs. Paul F. Drake, Phillipsburg; Delegates to State Society meeting, Mrs. J. M. Reese and Mrs. William Kline.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M.D., Reporter

The regular monthly meeting of the Atlantic County Medical Society was called to order by the President, Dr. Wm. C. Wescott, on Friday evening, April 13, at 8:30 p. m., at the Chalfonte Hotel. The minutes of the previous meeting were read and approved.

Dr. Jos. H. Marcus, Secretary, read a letter from Dr. Morrison, Secretary of the State Society, asking for information as to whether Dr. Coplin, who is an honorary member of the County Society, was also an active member. Since honorary members are not eligible for membership in the American Medical Association, it was moved that the Secretary communicate this information to Dr. Morrison.

Dr. W. Blair Stewart, reporting for the Committee on Public Health and Legislation, reported that the revision of the Constitution of the State Society cuts out all permanent delegates. The proportionate representation for active delegates is being debated. This county society approved the proportion of 1 delegate for every 15 members.

Dr. David Berner, reporting for the Board of Censors, approved the application of Mr. Dudley Singer, PH.D., for Associate Member.

The scientific program was as follows: Dr. J. C. Brown presented an "Unusual Case of Dys-tocia".

The reason for reporting this case is the comparative rarity of this complication and the unusual pathology associated with it.

The patient, white, aged 17, had her last menstrual period from August 19 to 23, 1927. She had no nausea or vomiting, and was uncertain for several months whether she was pregnant or not. Fetal movements were only faintly felt at any time.

Past history was entirely negative. She always enjoyed vigorous good health. Nothing happened during her pregnancy that gave her any idea of an abnormal condition.

Labor began at 5 a. m., March 20, 1928, in the charge of a midwife, and progressed normally until 10 p. m., when the baby's head was born. Here progress stopped. The midwife applied traction to the baby's head, which was finally pulled off the body. When first seen by a physician the uterus was firmly contracting and extended as high as the umbilicus; cervix was fully dilated; one arm of the fetus was hanging out of the vagina. Examination showed nothing wrong inside the chest of the fetus, which would obstruct labor. What remained of the fetus was delivered by embryotomy. The abdomen was generally enlarged, with a large cystic mass occupying the lower part. The penis and scrotum were small and hypotrophic. The testicles were not descended. The foreskin was tightly closed over the end of the penis. There were no signs of the anus nor any depression indicative of where it should be. The left was a club-foot, the right was normal. The wall of the bladder was tough and fibrous and varied in thickness from 3 to 10 mm. The contents were approximately 1500 c.c. of a light, straw-colored, odorless fluid. On the posterior superior surface was an opening of 2 mm, communicating with a diverticulum, which contained about 200 c.c. of the same fluid. The urethra extended downward to the penile portion. The ureters were patent and normal. The kidneys were normal and showed no evidence of hydronephrosis. The descending colon ended at the rectosigmoid junction in a cord, which could not be traced further. The trigone of the bladder was enlarged in proportion to general enlargement of the bladder. After the bladder had been hardened in formalin solution the space between the ureteral orifices was 8 cm., and from the orifices to the urethra 6 cm.

Nothing is known of the etiology of these abnormalities. They occur more frequently in males than in females in the proportion of 10 to 1. All of the modern textbooks on obstetrics mention this condition as one that may cause dystocia but none give any figures as to their incidence. Gant states that 1 child in 10,000 presents some anomaly of the rectum and anus. Frequently such malformations are associated, as in this case, with atresia of the vagina, distended bladder, undescended testicles.

Summary. This fetus presented the following pathology: Two months prematurity. A distended hyperplastic fibrous bladder containing 1500 c.c. of urine. Congenital diverticulum of bladder. Atresia of the urethra. Undescended testicles. Atresia of the anus and rectum. Club foot.

M. I. Schamberg, D.D.S., M.D., of New York City, discussed "Surgery of the Mouth".

The essayist made a very interesting presentation of various diseased conditions of the oral cavity, and showed many excellent lantern slides. He made a plea for closer interrelationship of medicine to dentistry because of the oral manifestations of systemic disease, many lesions first showing the mouth. A diagnosis can be made of pemphigus by the oral lesion before skin les-

ions appear. He showed slides of Hutchinson teeth diagnostic of syphilis and arthritis due to mouth infection. Many gastric ulcers can be traced to infected mouths. Dr. Schamberg warned against hot applications and poultices in jaw and tooth infections. He stressed the point that one need not hesitate to remove teeth that are acutely infected. It is the after-care of the abscess that is important. It is best to use cold to localize the infection. Unerupted teeth may be responsible for many reflex difficulties such as, nervous conditions, headache, and even epilepsy. He showed slides of angiomas removed by ligation or cautery. All growths within the mouth are potentially malignant and should be thoroughly removed.

BERGEN COUNTY

Spencer T. Snedecor, M.D., Reporter.

A special meeting of the Bergen County Society was held at the Hackensack Hospital, April 4, to receive the report of the Building Committee. Dr. Edward P. Essertier, Chairman, presented the proposition of purchasing the Mercer estate for \$40,000. This house would make an ideal building for the society. To defray the expense of such a proposition would mean an assessment of \$200 on each member. This would also compel an initiation fee of the same amount for new members, but it might be paid in installments. The annual dues would have to be raised to \$25 or more.

After a lengthy discussion it was decided that this proposition represented too heavy an expenditure for the society to undertake. The majority felt that the society was not large enough, nor would have sufficient use to justify this large financial burden.

A second proposition was that the society lease a hall or suite of rooms in a new professional building for \$3000 a year. This proposition was also turned down.

The regular monthly meeting was held on April 10 at the Holy Name Hospital, with Dr. McCormack presiding.

Dr. Sarla reported a balance of \$1292 in the treasury; 15 members have not as yet paid their dues for 1928.

The following were elected to membership: Frederick L. Muller, Carlstadt; Philip S. Busicco, Englewood; Parker A. Groff, Little Ferry; H. D. Pettit, Ridgewood; Henry L. Mosher, Lyndhurst; Carol D. Smith, Ridgewood.

Dr. Geo. W. Tidwell, of Wallington, was accepted to membership by transfer.

On motion of Dr. Finke, \$50 will hereafter be paid to the hospitals which entertain the county society.

Dr. Harold E. B. Pardee, Assistant Professor of Clinical Medicine, Cornell Medical School and New York Hospital, talked on "Arteriosclerotic Heart Disease", illustrated by lantern slides.

Eight years ago this title would have been "Chronic Myocarditis". It simply shows the change in point of view taking place during that time. We now consider it not so much from a pathologic as etiologic point of view. We speak of rheumatic, syphilitic, and sclerotic heart disease. The important factor is the etiology, because that must be treated if heart disease is to be prevented. This marks quite an advance; although it does not necessarily mean that we know very much more about it than we did 10 years ago it does give a good augury for the future.

How does it affect the heart? There are 3 main ways. It may produce a narrowing in one of the branches of the coronary artery. That is perhaps the most common. As a result, the area of heart muscle supplied by that arterial branch tends to undergo degeneration and fibrotic replacement. The branch may eventually thrombose and that gives rise to an infarction of the heart, which becomes organized and tends to heal from the periphery inward. The result is eventually a large scar. Of course it may be fatal.

The second way, more than one branch may be involved in this process of narrowing, and in some cases we have found 2 or 3 infarcted areas showing that the infarction has taken place months or years ago and healed.

The third result of arteriosclerosis upon the heart is a generalized narrowing of all the arterial branches, and this gives rise to a generalized replacement of heart muscle by fibrous tissue. That is the thing which we have talked about in the past as "chronic myocarditis", but is really a replacement fibrosis in which the narrow arteries become unable to support the muscle fibers which they should supply with blood.

As a result of these developments there may be enlargement or aneurysm of the aorta, or rupture of the heart, but these are remote secondary effects and not so important.

I want you to consider how regionally arteriosclerosis may be present in the body, quite marked in one system of arteries and not particularly in another. Some arteries may be quite affected and yet the coronary arteries little affected. The heart in such cases will be practically normal. Only when the coronary arteries become affected by arteriosclerosis does the heart itself become diseased.

It is important to discuss hypertension because it is often carelessly confused with arteriosclerosis as being the same thing. We must distinguish carefully because hypertension may exist for a number of years and give rise to arteriosclerosis as a secondary manifestation of the effect of the pressure upon the arterial walls. Unless the arteries of the heart become involved we do not get any effect of hypertension upon the heart. Occasionally arteriosclerosis localizes in the heart valves. When it affects the coats of the arteries of the aortic valves it may produce a primary valvular disease but that is rare.

The most common symptom of this disease is pain upon effort. The patient is perfectly comfortable sitting still but upon exertion will feel discomfort which centers around the precordium and may radiate typically as we associate the term "angina pectoris". It may not radiate at all, and that is important to bear in mind. Several organs can cause pain in that situation but the heart is the most common. We do not mean that pain may not arise from other causes, but it is certain that narrowing of the coronary branch can give rise to this pain on effort; a dull, heavy pain situated in the midline, radiating to the left arm, neck and shoulder and to the right. It is not constant and passes off as soon as the excitement is relieved.

Pain due to thrombosis of the coronary branch persists for hours. It may have the same situation as this pain on effort. With it goes a marked degree of general prostration and weak pulse. Blood pressure is low. Patient breaks out in cold perspiration, looks pale and appears to be in shock. There may be little pain; shock may be evident and attention not attracted to the heart.

Diffuse myocardial degenerative lesions usually develop symptoms of what we call cardiac insufficiency to come on gradually with increasing shortness of breath. Also the patient notices a fatigability. He does not have shortness of breath but cannot do things. He may call it weakness.

Chronic cough is another symptom and sometimes the initial one. Edema is rarely the first symptom. Another form in which it sometimes starts is sudden onset of arrhythmia. May notice the heart is flopping or jumping. Examination will show that such irregularity may be one of several kinds; premature beats or auricular fibrillation. Sometimes they will have spells of rapid heart action, palpitation, and temporary periods of auricular fibrillation. Heart block is an occasional initial symptom in this arteriosclerotic symptomatology, but rarely.

Physical signs are interesting. The presence of arteriosclerosis elsewhere in the body is presumptive evidence that it may also exist in the heart, but there may be arteriosclerosis in the coronary arteries and not elsewhere. It may occur surprisingly early; at age of 37 or earlier, but usually from 40 to 50 or later.

The most important physical sign is enlargement of the heart. If the patient has a thick chest wall, or is obese, use the x-rays as a check. But we know if the left border of cardiac dullness extends 2 cm. outside the midline we may consider that the heart is enlarged. When the enlargement reaches a considerable degree, perhaps 4 cm. beyond the midline, it is common to find mitral insufficiency also present. Mitral insufficiency is not due to a lesion of the valve itself but due to a degenerative lesion of the myocardial muscles or the ring which supports the mitral valves. Patients may pass a life insurance examination and yet their heart function is so limited that they cannot carry on their ordinary affairs.

The next important physical sign is the ringing quality of the second sound. It is hard to describe a clanging, metallic, musical reverberation. It is an important indication of changes in the aortic valve flaps themselves, and means a deepening or thickening of the flaps.

Aortic insufficiency is rare and only where the process involves the valve. It is not a diagnostic physical sign. The x-rays will show characteristic appearance of aortic arch.

A faint first heart sound often means arteriosclerotic fibrotic changes in the heart. A long duplicated first sound is fairly commonly heard in myocardial patients. Gallop rhythm is rarely heard except in myocardial conditions.

One physical sign which results only from myocardial changes is shown by electrocardiograph tracing, but the electrocardiograph will not differentiate between fibrosis of syphilis and fibrosis of sclerosis.

The diagnosis, in brief: A patient complaining of pain on effort; some unusual shortness of breath; palpitation; fatigue in middle or old age. Cardiac enlargement is the most important sign. Mitral insufficiency along with this, a prolonged first sound, gallop rhythm, cardiac arrhythmia appearing at an age when arteriosclerotic changes might come on, and the abnormal appearance of electrocardiograms.

Treatment: There is one drug which ought to be used much more frequently and that is theobromin. The fact that it does not always improve the condition is no reason why it should not be given.

It is supposed to dilate the coronary arteries.

The more diseased the artery the less able it is to dilate. It will act more upon healthy arteries, and that is what we want. By opening these collateral anastomoses we get more blood into the diseased arteries. I think that on all these patients it is worth while giving this drug, not continuously, but for a month, and after that for 2 weeks out of every month.

Nitroglycerin taken by mouth will relieve these attacks of pain; 1/200 gr. is effective. Sedatives are important in the treatment when there is pain on effort because the pain is a nerve reflex. I think luminol ½ gr. t.i.d., and chloral with sodium bromide, will help some patients. The more lethargic and unemotional the patient, the less will these drugs help, but in the nervous type of individual they will help a great deal to diminish the intensity and frequency of the pain.

Restriction of activity in these patients is a matter that is much discussed. Some men keep their patients in bed for months. On getting out of bed they have as much pain as before. I keep my patients up and about but limit activity which will produce the pain.

Bowel movements are important; relief of constipation will sometimes help the pain considerably.

Congestive heart failure: For these cases, digitalis should be given but do not give particularly large doses because they usually do not tolerate it well. Give it at the rate of 4-5 gr. a day for 3 or 4 days, then cutting it down. Patients should rest longer as they go on to develop edema.

Theobromin or diuretin is a good drug for this disease but use it in large doses; 10 to 15 gr. 4 times a day will do a great deal to get rid of the edema in congestive patients; do not continue for more than 4 or 5 days, as it will upset the stomach terrifically.

The discussion was opened by Dr. Herman Trossbach with remarks on the hygienic aspect of the treatment of the disease. Dr. R. Gilady and Joseph Van Dyck also discussed the subject.

Medical Club of Hackensack

Lewis Greenberg, M.D., Secretary

The Medical Club met March 21 at the Ori-tani Field Club, in Hackensack, with Dr. Donald A. Curtis in the chair. There were present 17 members, and a number of invited guests, including the Superintendent of the Hackensack Hospital and several Chiefs of Departmental Services.

Dr. David Goldberg reported a "Series of Cases of Trichinosis" observed in an Italian community in the upper part of Bergen County. He gave a general description of the affection and then a detailed analysis of the cases observed, the symptoms, general course, treatment and final outcome, as well as the eventual tracing of all cases to one common source of infection.

Dr. Lewis Greenberg then read a short biographic paper on Jenner, in which the speaker gave an outline of Jenner's career, his work in connection with vaccination, the difficulties encountered and the final acceptance of the idea by the profession at large.

The discussion brought out the existence of a wide publicity campaign by antivaccinationists as well as a number of suggestions for combating this activity.

BURLINGTON COUNTY

R. I. Downs, M.D., Reporter

A regular meeting of the Burlington County Medical Society was held at Newlin's Hotel, Moorestown, New Jersey, on Wednesday, April 11, at 1 p. m. After a splendid dinner, President Anderson called the meeting to order. There were 25 members and guests present. The minutes of the previous meeting were read and approved.

The application for membership of Dr. Paul M. Champlin, of Maple Shade, New Jersey, was read and referred to the Board of Censors for action.

The program of the scientific session followed immediately. Dr. D. H. B. Ulmer, chairman of the section on surgery, announced the following program:

"Ano-Rectal Infections", with lantern demonstrations, by Collier F. Martin, M.D., of Philadelphia, Penna.

"Tonsillectomy", by Walter I. Annon, M.D., of Philadelphia, Penna.

Dr. Martin considered that the 2 subjects were very appropriate together, having both the upper and lower air passages under discussion at once. For the rectal infections follow the nose, throat, tooth and general acute infections. Dr. Martin demonstrated clearly the local anatomy with the relations of retro-rectal, pelvi-rectal and ischeo-rectal abscesses to each other.

He stated that local infections started not from without, as from a scratch, but from within and at the ano-rectal line. There is no external fistula alone. An internal fistula is always present through which passes the infection. A free excision of the local abscess with excision of the internal opening is necessary for a complete cure. No packing is used but a vasoline gauze dressing applied. The wound heals by granulation. Many slides of cases demonstrating the subject followed.

Dr. Annon, under the subject of Tonsillectomy, stated the 4 main methods of removing the tonsils as: finger dissection, knife dissection, inversion and Sluder. Any method done well, however, is satisfactory.

He developed the subject under the headings of anatomy, blood supply, physiology and pathology of the tonsils. He mentioned under treatment of local inflammations, caused by the fusiform bacillus, the local application of a solution of neo-salvarsan and neo-salvarsan internally for a severe infection.

Dr. Annon considered that the coagulation time of blood before a tonsillectomy was more beneficial in a legal aspect than a medical. For why should the coagulation time be more necessary before a tonsillectomy than any other operation. He prefers injection of 10 minims of para-thymone (Lilly) 6 hours before operation.

After a free discussion of the subjects, a rising vote of thanks was tendered Drs. Martin and Annon for an exceedingly interesting and instructive afternoon.

Dr. Newcomb arose and said that in the State Assembly, bills from the osteopaths and naturopaths were rising continuously with an apparent lack of interest of the medical profession to fight them. Bill No. 193 gives the right to osteopaths to give anesthetics, administer narcotics and perform operations following a 2 years' training with an osteopathic surgeon. If more interest is not shown by the doctors, Dr. Newcomb fears that bills similar to the above will be written on the statutory books.

Dr. Hunter, of Gloucester County, said that Dr. McBride, chairman of the Welfare Committee, was watching these bills and was well qualified to stop them in a quiet way.

Dr. Thorn stated that an appeal to the physicians of the country appeared in the A. M. A. Journal. It desired the doctors to write their senators to allow reduction of travel expenses to medical society meetings from their income taxes.

CAMDEN COUNTY

R. E. Schall, M.D., Reporter

The regular monthly meeting of the Camden County Medical Society was held Tuesday, April 10, 9 p. m., at the Camden City Dispensary, under the presidency of Dr. T. W. Madden.

The scientific program consisted of 3 papers, as follows:

(1) "Eye Manifestations of Systemic Disease", by Willard G. Mengel.

(2) "Recognition and Relief of Acute Sinusitis", by Oram R. Kline.

(3) "Early Diagnosis in Acute Mastoiditis", by Reed E. Hirst.

(All of these papers will appear in full in a future issue of the Journal).

Dr. Howard G. Stimus, of Camden, was elected to membership.

CAPE MAY COUNTY

Ocean City Medical Club

Aldrich C. Crome, M.D., Reporter

The Ocean City Medical Club held its regular meeting at the Golf Club on the evening of March 16, having as guest of honor, and speaker of the evening, Dr. James Hunter, Jr., of Westville. The City Board of Health, the Graduate Nurses Club and a number of physicians from Cape May and Atlantic Counties were also present as guests. The membership of the club embraces 100% of the physicians practicing in Ocean City; a condition which has existed since the founding of the club in December, 1925.

CUMBERLAND COUNTY

E. S. Corson, M.D., Reporter

A well attended and highly interesting meeting of the Cumberland County Medical Society was held at the Hotel Cumberland, Bridgeton, April 3.

Dr. L. E. Myatt was appointed representative of the society in the Antidiphtheria Campaign. A committee was appointed to present resolutions affecting the death of Dr. W. P. Glendon. Dr. Muriel Ramsey, of Millville, was elected a member.

Dr. John J. Gilbride, of Philadelphia, gave an illustrated lecture on the "Diagnosis and Surgical Treatment of Gall-Bladder Disease". This disease is a very frequent cause of "indigestion". The differential diagnosis is difficult at times. It may simulate duodenal ulcer and appendicitis. Gall-stones may be present and complicate pregnancy. Jaundice is not as common as supposed. The gall-bladder may be occluded and the common duct patulous. Infection may occur by way of the bile duct, cystic artery, portal vein or lymphatics. The bladder may be visualized by the use of dyes. Conservative surgical treatment of the gall-bladder should be attempted whenever possible. Anastomosis to adjacent organs is not advisable. He does not regard lavage of the gall-bladder as a curative process.

Dr. Walt P. Conaway, President of the State Society, finished his tour of visitation of the county societies at this meeting; having attended meetings of each of the 21 county societies during his incumbency of the office. He discussed the Antidiphtheria Campaign, annual registration of physicians and periodic health examinations.

Dr. H. O. Reik spoke of the work of his dual office of Editor and Executive Secretary.

ESSEX COUNTY

John J. Connolly, M. D., Reporter

The Essex County Medical Society held its regular meeting Thursday evening, April 12, Dr. Max Danzis presiding.

The Secretary, Dr. Frank W. Pinneo, read the minutes of the previous meeting.

Dr. Elmer G. Wherry made the motion that Dr. John F. Hagerty be designated as the choice of the Essex County Medical Society for the office of Third Vice-President of the State Society. This was seconded by Dr. Richard N. Connolly.

A motion also was made and seconded that, in the revision of the Constitution and By-Laws of the State Medical Society, provision be made that the appointees to the Welfare Committee be ratified by the various county societies.

A paper on "The Early Diagnosis of Tuberculosis" was read by Dr. E. Runnells, of the Union County Tuberculosis Sanatorium. Preceding this paper, the film, "The Doctor Decides", was shown.

GLOUCESTER COUNTY

James Hunter, Jr., M.D., Reporter

A regular meeting of the Gloucester County Medical Society was held at the Pitman Golf Club, Thursday, April 19, 1928, at 1:30 p. m. On motion, the regular order of business and reading of minutes of previous meeting were dispensed with.

Dr. Krusen, of Mullica Hill, N. J., was unanimously elected to membership in the society.

Dr. Rose, of the Thyroid Clinic of the University of Pennsylvania Hospital, gave an instructive talk upon "Goiter, Its Symptomatology, Pathology, Prognosis and Treatment". An interesting discussion followed, participated in by Drs. Beardsley and Klopp, of the Jefferson staff; J. J. Gilbride, of Philadelphia, and Martin, of Atlantic City.

Following this discussion, the society adjourned and joined the Woman's Auxiliary to the Gloucester County Medical Society as dinner guests of Dr. and Mrs. Samuel F. Ashcraft, of Mullica Hill, in honor of the completion of Dr. Ashcraft's fortieth year of the practice of medicine.

Dr. Campbell, on behalf of the society, presented Dr. Ashcraft with a "Gladstone bag" as a token of the esteem and love in which he was held by every member of the society. Dr. Campbell in felicitating Dr. Ashcraft upon the completion of 40 years of active practice, was in a most happy vein and his remarks were received enthusiastically by all present.

Dr. Ashcraft's response was a replica of the genial spirit of the host, at times reminiscent, then droll and brimming over with good natured fun. One can readily understand, after listening to him, just how he has endeared himself to the community in which he has practiced so long and successfully.

Mrs. Ashcraft was presented with an "ostrich bag" by the Woman's Auxiliary as a token of the

love and esteem in which she is held by the members.

Many medical men from different parts of the state were present to convey their regards and appreciation to Dr. and Mrs. Ashcraft and wish them long life and continued prosperity.

HUDSON COUNTY

M. I. Marshak, M.D., Reporter

The Hudson County Medical Society met at the Carteret Club, Jersey City, on April 3, with Dr. S. R. Woodruff presiding.

A subcommittee of the Committee on Abuse of Medical Charity, consisting of Drs. Sweeney, Alexander and Swiney, called on Mayor Hague of Jersey City and conferred with him for close to 2 hours. They reported that the Mayor welcomed constructive criticism, and told them that the subject was so large and the ramifications so many that he wished sufficient time in which to study its many angles in order to arrive at proper methods of relieving the situation.

Dr. Orrin Wightman, of the Polyclinic School and Hospital, and Dr. Edward Livingston Hunt, of the N. Y. Post-Graduate School and Hospital, gave moving picture demonstrations of "Syphilis of the Cardiovascular and Nervous Systems". These pictures were taken at the New York City Hospital, on Welfare Island, under the direction of these doctors.

Dr. Wightman showed 2 films. The first, demonstrated pathologic sections of various lesions in the heart and blood-vessels, laying special emphasis on the round cell infiltrations about vessels supplying this organ and the final changes into fibrosis. They also showed the gradual obliterations of the lumen of these vessels. In commenting on these changes, he wondered if any one knew of any method which could bring these damaged and changed tissues back to normal; he knew of none. He advised that all syphilitics be treated all of their life in order to prevent these changes. After the changes have occurred, the patient's life must be so regulated that no further strain is placed on the damaged organs. The second of Dr. Wightman's films, carried a patient with an aortic aneurysm, which protruded through the sternum, through his last period of illness and then showed condition of his heart and aorta at autopsy. When first seen, the patient had a large pulsating mass protruding through the upper part of the sternum. X-ray plates printed along side, presented a large shadow attached to the heart shadow which took in the mass before mentioned.

Pathologically, this mass was of enormous size, occupying a good part of the chest cavity. The aneurysmal sac was large enough to admit the pathologist's fist. Dr. Wightman suggested the thought that muscular people and those who perform physical work run a greater chance of having cardiovascular syphilis, while brain workers are more liable to nervous system damage.

Dr. Hunt's first film was practically a demonstration of "tabes". It showed patients with lost reflexes, ataxic gait, Argyll Robertson pupils, and involvement of the dorsal and cranial nerves. Such complications as girdle pains and Charcot joints were also demonstrated. He stated that the gait of the tabetic is a "stick and a stamp". On the second film he showed patients having other chronic nervous system diseases, such as Parkinson's postencephalitic disease, paralysis agitans, multiple sclerosis, alcoholic neuritis, chronic muscular atrophy, etc. The film showed

the effect of these diseases on reflexes, gait, general habitude and body construction.

Drs. Hasking, Arlitz, Cassidy, King, Curtis, Jaffin, J. Koppel, and Barishaw entered into the discussion.

Osler Clinical Society

M. I. Marshak, M.D., Secretary

Dr. Howard Lillienthal, of New York, gave the "Annual Oration" of the Osler Clinical Society, at the Carteret Club, Jersey City, on March 21. Dr. D. Miner presided at the meeting, which was open by invitation to the medical profession of Hudson County. The subject of Dr. Lillienthal's talk was "The Surgical Treatment of Pulmonary Tuberculosis", and the report which follows contains some of the outstanding statements made during the oration:

One cannot cure pulmonary tuberculosis by surgery. Only if the diseased tissue can be cut away, can a cure be expected. The reaction of patients to operations depends on the ability of the heart to pump blood through the lungs for aëration. If tuberculosis can be cured in any other way, surgery should not be attempted. As soon as the prognosis becomes poor as to arrest or as to chronic invalidism, then surgery should be attempted. If surgery is to be done, one lung must be in a good functioning condition. The proper operation for the given individual must be chosen, a physiologist and an experienced surgeon acting in coöperation. Pneumothorax should be attempted in most cases before more extensive surgical treatment is tried. Thoracoplasty, in stages, is the operation of most frequent choice. Surgery can sometimes relieve when cure is impossible. Valvular spontaneous pneumothorax should be operated upon with a good sized trocar and canula instead of being allowed to go on until the patient dies. In severely painful pleurisies, injection of the posterior root ganglia is indicated.

Dr. Lillienthal discussed the value of induced pneumothorax, phrenic nerve evulsion, phrenic nerve pinching, thoracoplasty, and apicolysis. Thoracoplasty should always be done in stages to prevent shock due to the disturbed mediastinum. It is preferable to begin at the top, taking from 3 to 5 ribs at a sitting. Cavities fail to collapse because negative pressure suction is missing. Extra pressure is necessary to produce collapse, either fat, muscle or crumpled rubber tissue being used to fill in the space. Long standing chronic empyemas are suspiciously tuberculous and are difficult to treat. Suction should never be used. A drain with a "flapper valve", which he demonstrated, should be installed. This gradually drains out the fluid and allows the lung to come back slowly.

There is danger of air embolism in any operation about the chest. It can be avoided by placing the head lower than the buttocks. Artificial respiration should never be used in these cases as it increases the chances of more air embolism.

The doctor showed slides which illustrated diagrammatically the effect of phrenic nerve pinching, or evulsion, on the diaphragm and the lung. They showed that these operations produced a paralysis of the diaphragm on that side with a loss of lung space equivalent to the injection of between 200 and 400 c.c. of air. He also showed x-ray slides showing the result of these operations. A number of slides diagrammatically demonstrating the small pneumothorax of Barlow and its effect on the disease as compared to the healthy parts of

the lung; and x-ray slides of cases where thoracoplasty and apicolysis were done, with photographs of the patients were then shown.

Drs. Pollak, Marshak, Meritore, Dickinson, Curtis and Jaffin took part in the discussion, which was closed by Dr. Lillienthal.

HUNTERDON COUNTY

Leon T. Salmon, M.D., Reporter

This society met in regular session April 24 at Flemington. There was present a fair number of the membership, the usual one-third.

After a regular business meeting the society was addressed by Dr. Henry O. Reik. He had come to our meeting in an endeavor to change the attitude of the society toward the Woman's Auxiliary organization which we had been put on record as being unfavorable to in this county. Dr. Reik took up the history of the proposed local organization and followed its growth by stages until the present time; he outlined the nation-wide growth of it and then presented its history in this state. In this connection it was shown that our society would be the last of the county societies to affiliate with the movement and that Hunterdon stands alone in rejection of the plan. Further, he detailed the advantages which accrued to societies which have adopted the scheme.

Very considerable discussion followed this presentation and much difference in opinion developed. It was followed by a decision to reconsider the action of the society, placing itself in opposition to the idea, and after still further debate it was decided to postpone decision until all members shall have been acquainted with the purpose to take final action at the next regular meeting in July.

Dr. G. N. J. Sommer entertained the society with a talk upon "Protein Therapy" and the uses of mercurochrome and metaphen intravenously in septicemia. He also dwelt upon the use of the new streptococcus serum in erysipelas and the very decided help which comes in some cases, where this is not a success, from the use of generous doses of diphtheria antitoxin, intravenously.

After dinner the society adjourned.

MERCER COUNTY

A Dunbar Hutchinson, M.D., Reporter

Regular monthly meeting of the Mercer County Medical Society was held at Carteret Club, April 11, 1928. The minutes of the preceding meeting were read and approved.

Dr. Sigmund Greenbaum, Associate Professor of Dermatology and Syphilology University of Pennsylvania Graduate School, was introduced by President Sista, and gave a most instructive talk, illustrated with lantern slides, on the subject of "Nonsurgical Diseases of the Mouth, with Particular Reference to Syphilis".

Dr. Greenbaum paid particular attention to the diagnosis of syphilis and emphasized the difficulty in differential diagnosis. The slides materially aided the large audience in more clearly understanding clinical signs appearing in the mouth and on the face.

Drs. W. D. Farmer, Harold Crisp Cox, and Albert F. Moriconi were elected as Associate Members. The application of Dr. Louis A. Stein was read and referred to the Membership Committee.

A communication from the Monmouth County Medical Society, relative to medical and surgical

fees, was read and the Secretary authorized to acknowledge the same.

The Treasurer gave a report of the Testimonial Banquet, which was received and bills ordered paid.

MIDDLESEX COUNTY

Medical Section of Rutgers Club

John H. Rowland, M.D., Secretary

At a special business meeting of the Medical Section of the Rutgers Club, held on Friday evening March 23, at the office of Dr. Howley, 419 George St., New Brunswick, N. J., the following officers were elected for the ensuing year: Chairman, Dr. F. W. Scott; Vice-Chairman, Dr. J. P. Schureman; Secretary and Treasurer, Dr. J. H. Rowland.

Medical Section Rutgers Club

J. H. Rowland, M. D., Reporter

The Medical Section of the Rutgers Club held its monthly meeting at the home of Dr. Hoffman, 91 Bayard Street, New Brunswick, on Friday evening, April 20, 1928. There were present 40 members, friends and guests.

The meeting was called to order at 9:00 p. m., by the Chairman, Dr. Scott. There being no business to carry on, the entertainer of the evening, Prof. Birch, of New Brunswick, treated the group to many elusive tricks in sleight of hand.

After the entertainment the host served most pleasing refreshments. The meeting adjourned spontaneously at a late hour.

PASSAIC COUNTY

John H. Carlisle, M.D., Secretary

A regular meeting of the Passaic County Medical Society was held April 12, 1928, at the Paterson Health Center. Owing to absence of the President, Dr. Spickers presided. There were 33 members present. After the minutes of the preceding meeting had been read and approved the members of the Woman's Auxiliary were invited to join us for the program of the evening.

Dr. Potter, of our society, read a paper about the work of the Northern New Jersey Training School for Feebleminded Girls of which she is Director. The school is situated at Totawa, N. J., and is already in partial use. It is hoped that by proper training it may be possible to fit the girls for a life of economic independence either through industrial or domestic positions.

The scientific program of the evening was changed, owing to the illness of Dr. Vreeland, who was to have read a paper on "Mastoiditis", and Dr. Shepherd, Director of the new Valley View Tuberculosis Sanitarium, spoke on the "Symptoms and Diagnosis of Pulmonary Tuberculosis". During the discussion which followed Dr. Hagen, one of the Managers of Valley View, spoke of his hope that the near future might see a preventorium for child contact built at the sanitarium.

Dr. Marsh moved that a committee be appointed by the chair to draw up resolutions on the death of Dr. Parke.

Dr. Hagen moved that the Secretary be instructed to write U. S. Senators and Representative in favor of the Robinson amendment to the Revenue Reduction Bill (H. R. 1) authorizing the deduction from federal income taxes of expenses incurred when attending medical conventions.

SALEM COUNTY

William H. James, M.D., Reporter

The Salem County Medical Society held its regular meeting April 11, at the Salem Memorial Hospital. There were not the usual number of members present but we had a very helpful meeting and it was thoroughly enjoyed.

The meeting was opened by President R. M. A. Davis. The regular business was conducted in the usual manner. Dr. George A. Davies, who has returned to the state, was gladly reinstated as a member in good standing.

At the conclusion of business, the society was entertained by Dr. John J. Gilbride, formerly Assistant Professor of Surgery at the Medico-Chirurgical College of Philadelphia. His subject was "Indications for Operations on the Stomach". Not all cases of stomach trouble are benefited by surgery; medical treatment has done considerable for patients suffering from severe stomach diseases. Diet has done lots of good in cases where surgery would not. Ulcers almost always have, as one striking symptom, vomiting of blood. Operations on the pylorus are not very satisfactory. Hemorrhage occurs in about 20% of cases of ulcers of the duodenum. Starchy foods are not well born in these cases.

Dr. Gilbride quoted a number of case histories to prove his statements and, taking it all together, it was a very interesting and instructive lecture. A rising vote of thanks was given the Doctor.

The society adjourned to meet at the Country Club, during the middle of May, to enjoy its Annual Planked Shad Dinner.

SOMERSET COUNTY

Lancelot Ely, M.D., Reporter

The Somerset County Medical Society held its regular meeting April 12, 1928, in the Nurses' Home, Somerset Hospital, Somerville. Dr. A. J. Casselman, of Camden, gave a talk on the "Latest Methods of Treatment for Venereal Diseases", with demonstrations by lantern slides. The nurses of the hospital were invited to hear the lecture.

UNION COUNTY

Russell A. Shirrefs, M.D., Reporter

A regular meeting of the County Medical Society was held on the evening of April 11 at the Nurses' Home, Muhlenberg Hospital, Plainfield, with the President, Dr. F. W. Sell, in the chair. Despite the very stormy night, there was an attendance of 40. After routine business, an interesting clinical program was presented.

Dr. E. W. Hedges reported 2 cases; one of traumatic rupture of the intestine, and the other an intestinal obstruction, both cured by operation.

Dr. B. VanD. Hedges reported a rare case of fibroma of the stomach which had given practically no symptoms of gastric disturbance until shortly before operation. Removal of the mass, the size of a golf ball, was followed by the man's recovery.

Dr. Langman described an unusual case of tubercular adenitis of the mediastinal lymph nodes in a young colored man, followed by rapid and extensive involvement of the adjacent lung tissue. Dr. Thomas Blair presented a woman who developed a cellulitis of the leg complicated with erysipelas. Antistreptococccic serum controlled the latter; the former was relieved by incision and drainage. A large denuded area was later successfully covered by skin grafts.

Dr. E. P. Weigle presented a colored boy,

2½ years old, whose acute osteomyelitis of both ulna and femur was cured by removal of large sequestra.

Dr. E. S. Krans reported the case of a youth, aged 19, who sustained a fracture of the superior maxilla during a football game. His injury was quickly followed by acute poliomyelitis, from which he is gradually recovering.

Dr. H. V. Hubbard presented a man with thrombosis of the retinal veins of one eye—otherwise in good health—vision in the affected eye being greatly impaired. The cause, at present undetermined, might be due to some undiscovered focal infection.

Dr. F. W. Lathrop reported a case of congenital dilatation of the colon, in a boy 5 years old. His bowels move only once in 3 or 4 weeks! The prognosis is unfavorable, as the surgical mortality is 60%, and under medical treatment, 70%.

Dr. B. VanD. Hedges and Dr. J. S. Green spoke on the proposed amendments to the constitution and by-laws of the State Society; and invited suggestions for such changes as might seem desirable. The society unanimously adopted a resolution heartily endorsing the state-wide campaign against diphtheria, by the use of toxin-antitoxin.

Dr. C. H. Larabee, of Summit, and Dr. Francis Story Meyers, of Westfield, were elected members of the society. Two proposals for membership were also received for action at the next meeting.

The pleasure of the social session which followed the meeting was enhanced by an appetizing collation served by the hospital.

Summit Medical Society

William J. Lamson, M. D., Secretary

The regular monthly meeting of the Summit Medical Society was held at Wallace Pines on Tuesday, April 24, 1928, Dr. Campbell entertaining, and the President, Dr. Morris, in the chair. Present: Drs. Burritt, Byington, Campbell, Dengler, Disbrow, Hallock, Krauss, Lamson, Meeker, Meigh, Macpherson, Morris, Smalley, Tidaback and Wolfe, and Dr. Surlouff of Summit as guest. Minutes read and approved.

Through the courtesy of the Union County Tuberculosis League, a film, "The Doctor Decides", was shown. It emphasized the necessity of early diagnosis in order to eradicate the disease.

Dr. Campbell then reported the clinical history of some unusual and interesting cases which had occurred in his practice, and these were discussed.

WARREN COUNTY

F. A. Shimer, M.D., Reporter

A quarterly meeting of the Warren County Medical Society was held at the Elks' Club, Phillipsburg, N. J., on Tuesday, April 10, 1928, at 11 a. m. Dr. G. H. Bloom, President, in the chair.

The minutes of the last quarterly meeting were read and approved.

The Treasurer's report showed most of the members in good standing and the society's finances in good shape.

Members present: Drs. G. H. Bloom, L. H. Bloom, G. M. Cummins, P. Drake, F. A. Shimer, L. C. Osmun, H. Bossard, and F. Curtis.

Dr. V. S. Messinger, of Easton, Pa., gave a very interesting lecture and demonstration on "Diabetes". Luncheon was served in the dining-room of the club.

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INDIGESTION AS AN EARLY SYMPTOM OF ORGANIC DISEASE

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The word "indigestion", as used in the title implies more or less long continued disturbance of digestive function, either of daily occurrence or of an intermittent type such that there have been two or more repeated attacks. The terms *acute* and *chronic* do not apply so far as the title and subject matter are concerned, although it will readily be surmised that for the more part it is chronic indigestion that is under discussion.

Such manifestations as pain, sour eructations, heart-burn, belching, flatulence, nausea, vomiting, loss of appetite, so-called biliousness, looseness of the bowels, are symptoms which even singly and if of daily or repeated occurrence may be classed as indigestion. They may occur alone or in any combination. In addition there may be headache, dizzy spells, coated tongue and bad breath, nervousness, constipation and various other more or less minor symptoms.

For the mechanism and significance of the symptoms in detail the work of Cannon, Carlson, Alvarez, and others should be consulted. It is not necessary to go into detail here, but these are a few of the symptoms that deserve special comment. Pain of the referred type,

or if induced by inflammatory conditions of the peritoneum, will hardly come under the head of pain that is classed as indigestion, and need not be dwelt on here.

In the majority of cases of the type under discussion whatever pain there may be is caused probably by abnormal contraction of hollow viscera. This may range all the way from the severe pain of a gall-bladder or intestinal colic, to the vague discomfort known as hunger pain which accompanies many cases of hyperacidity whether due to ulcer or other factors. Carlson has shown recently that this sensation, which varies from a mere discomfort to pain severe enough to interfere with the patient's activity, is due to a slow tense contraction of the cardia which becomes more or less tonic, and releases slowly on the ingestion of food or alkali which neutralizes the over-acid stomach content. The pain of ulcer, except when perforating, is probably due to this same mechanism.

Nausea without vomiting is only rarely found in disease of the stomach. It is a very frequent symptom when indigestion is caused by pelvic disease. Loose bowels of the chronic type are quite characteristic of Graves' disease, and it must not be forgotten that 2 or 3 loose movements in the morning, especially when incited by the taking of food, is very suggestive of *achylia gastrica*.

Periodic bilious attacks often cease altogether after some focus of infection, such as diseased tonsils, have been removed. That such manifestations have a primary hepatic or biliary origin is very doubtful.

Flatulence is caused by the production of

abnormal amounts of gas in the small and large intestine. Of course, fermentation of starches or putrefaction of nitrogenous foods may be a cause; but it must not be forgotten that there is a constant interchange of gases between the bowel and the blood stream, and it is this interchange which in health maintains a normal balance. Anything, therefore, interfering with this function, such as abnormal composition of the blood, as in anemia or cyanosis, or irregularity in the supply of blood, as in cardiovascular disease, will cause flatulence; and as a matter of fact this is the most common of indigestive symptoms in heart disease and other circulatory disturbances.

The problem always presented in the exhibition of any variant of this picture of indigestion is primarily—are these functional symptoms, purely, or do they indicate the onset or presence of organic disease?

Unfortunately, far too often the primary assumption is that the trouble is functional, and this is assumed with no or little effort to determine the presence or absence of organic cause. This position is the more readily taken the fewer the presenting complaints, and the more easily the physician is led to believe that the use of some simple remedy will give relief. Out of sight, out of mind, and the patient goes off relieved temporarily, to be sure, and forgets his own uneasiness of body and mind in the readiness with which the one has yielded to a remedy and the other to the assurance that there is nothing which gives his physician concern.

If nervousness be added to the complaints, both patient and physician fall the more readily into the trap diagnosis of "nervous indigestion". Now, nervousness is far more often the result of indigestion than is indigestion the result of nervousness. Witness the fact that in looking over 224 case records in which indigestion in some form was a chief complaint, only 3, after careful study, were set down as "psychoneurasthenia—cause undetermined".

The records chosen for study were those in which indigestion was one of the leading symptoms, and often the chief complaint, which brought the patient to seek advice. Out of 1000 case records looked over, 224 pre-

sented this symptom as a major and usually long standing complaint. The entire group studied represents cases of the type that come to the internist for diagnosis. They are in a measure put through a certain selective process before they present themselves, and in consequence the preponderance is toward respiratory, gastro-intestinal, and cardiovascular types of disease, and those conditions which fall within the vague confines of internal medicine. The frankly surgical, urologic, orthopedic, psychiatric and neurologic cases are in the main attracted more directly to specialists in those lines. Moreover, those cases of indigestion which do yield easily and stay cured naturally do not seek the internist for diagnosis. These limitations must be kept in mind in whatever general applications are to be made from the study of such a group as this.

Care should be exercised in the use of the word "functional", as it is commonly applied both to symptoms and to disease. Symptoms are the expressions which the body normally exhibits in the presence of disturbed function. Therefore, strictly speaking, all symptoms are functional. The term is, however, rather loosely applied to symptoms arising from an organ not itself regarded as a seat of disease, but secondarily affected by disease of some other organ. Indigestion may thus be spoken of as functional when it is regarded as arising from some extraalimentary cause, such as disease in heart, kidney, lung, pelvic organs, etc. From this viewpoint it is an easy transition to the idea that a symptom is functional when it arises as a result of vague or ill understood disturbance, or of something to which there is no clue whatever. Then, in still more loose employment, it becomes an equivalent for "neurastenic", and thus its use evinces in many instances not alone inaccurate thought, but tacit confession of ignorance and inability or disinclination to make further investigation.

The term "*functional disease*" is another matter. All that expression ever means in a strict sense is that the cause of the symptom complex is unknown, that no organic basis can be discovered. The term is inexact and misleading and its use should be abandoned. There can be no disease without organic change of

some kind. The human body is dependent for its proper functioning on such a great variety of chemical and electric as well as physical reactions, of whose existence and mechanism there is such hazy knowledge, that the hypothesis that all disease is organic is the soundest one to follow. It is this misapprehension of the term functional that lies at the bottom of the phrase "nervous indigestion". Nervous indigestion is not a diagnosis. It is a confession of either laziness or ignorance.

To return here to the study presented in this series of cases, it is a significant fact that out of 224 patients, one of whose major complaints was indigestion, the final diagnosis was of some definite organic disease in 211, while the other 13 were diagnosed as follows: Psychoneurasthenia, cause unknown, 3; constipation, habitual, 3; achylia gastrica, cause unknown, 2; anemia, secondary, cause unknown, 5.

Faber ascribes achylia to a true gastritis, a low grade inflammation of the acid cells in the wall of the stomach; and if that is accepted as a primary condition these 2 cases fall into the organic group. Similarly, an anemia of any sort may be considered organic, which leaves in all but 6 cases out of 224 which have not some demonstrable organic lesion.

If now the table is considered from the standpoint of the diagnostic grouping of the cases studied, 2 facts are particularly apparent, and on these special stress is to be laid.

Table showing the conditions diagnosed in 224 cases whose chief complaint was of indigestion.*

Gastro-intestinal diseases (including liver and gall-bladder)	106
Of these:	
Achylia gastrica, cause undetermined	2
Constipation, habitual	3
Extraalimentary diseases	118
Cardiovascular-renal	35
Pelvic conditions	5
Fecal infection	28
Tobacco toxecosis	10
Respiratory disease	15
Pulmonary tuberculosis	10

*Note: Indigestion is not necessarily in each case an actual symptom of the condition diagnosed; but it is the complaint which brought the patient to be examined.

Anemias	10
Primary	4
Secondary, cause undetermined	5
Splenic	1
Purpura hemorrhagica	1
Diabetes	1
Endocrinopathies	10
Psychoneurasthenia, cause undetermined	3

The most striking thing, perhaps, on casual inspection is this: that of the total number whose major complaint was indigestion, less than half had disease of the alimentary tract to account for the symptom. This is of interest because it has no analogy in other types of disease symptomatology. Cough, for example, will be, 9 times out of 10, a symptom of respiratory trouble. Frequent or painful urination will usually be evidence of genito-urinary disease. Edema of the lower extremities, at least 4 times out of 5, will point to cardiovascular disorder; and yet we have a series of 224 cases of indigestion where in less than half—106—is the symptom due to disease of the organ which gives it expression. This fact of itself should make the examiner alert to discover what may be wrong, for he is evidently dealing with an organ which is peculiarly sensitive to disease processes in other parts of the body.

The second fact is evident on a little closer inspection and is of considerably deeper significance. Allusion has already been made to it in the discussion of the term "functional disease". This is the point that, of the entire group of 224, only 6 have not been shown to have some accompanying organic disorder. These are 3 cases each of habitual constipation, and of psychasthenia. This is a figure which, though derived from what is admittedly a somewhat filtered group of material, must nevertheless furnish food for considerable reflection.

It must be understood that no claim is advanced that indigestion is a symptom of each and every disease specified in each and every case on this table; but it is stated that indigestion was one of the chief factors in bringing the patient in for examination, and in the ensuing estimate of the patients physical con-

dition these diseased conditions were discovered. Furthermore, if the digestive tract is so sensitive to changes in function in other parts of the body, as is indicated by the extra-alimentary group of 116, it becomes at once a highly useful guide or index for the study of early symptoms. Mackenzie pointed out long ago (1910) that the greatest gap in our knowledge of disease is our ignorance of its beginnings. The hospital, the clinic, and the laboratory have each made enormous contributions to the study of disease in its advanced stages; but not one of these great teaching and research institutions has any but the smallest contact with disease in its inception.

Here lies wide open to the general practitioner the most untouched and fertile field for research in the entire scope of medicine. He needs no other equipment than what he already possesses and constantly employs in his daily routine. Two of his tools he should develop and make more useful than he does at present. One of these is more careful, more complete examination of his office patients; the other is its necessary accompaniment—careful notes.

Should the utopian era ever arrive when all general practitioners do this sort of work and take full advantage of the opportunity which lies at their feet to be grasped, the science and art of medicine will have made the greatest progress in its history.

The difficulty to the practitioner is one of finding time to do more careful work: the discouragement is that it will necessitate large masses of material, painstaking labor in accumulating them, and not always by any means the actual realization of having added to medical knowledge; but the reward will come in actually having in his own hands material valuable to himself, and the mental stimulus which always comes in trying to discover truth.

The last half century has been the era of the pathologist and the laboratory worker. No research work has been possible without them. No new knowledge has come to light but their hand has shared in its revealing. Indeed, without the laboratory scarcely a fraction of the enormous strides made by medicine in these recent years would have been possible. This has resulted in an excessive development of the laboratory viewpoint, which today en-

tirely overshadows the clinician. In medical discussions it is laboratory research that is the topic before the house. The inbred scientist speaks and the clinical man sits by in silence praying that he may gather a few crumbs with which to sustain himself next day through his weary dull round of a routine which seems to him to add not one jot nor tittle to the sum total of medical knowledge.

This attitude is carried to such absurd extremes that some clinical laboratories have printed on the bottom of their urine reports a line headed "Diagnosis", and actually have the courage—or perhaps it is mistaken zeal—to fill it in. The pathologist assumes the right to be arbiter of diagnosis, and the practitioner grants it. It is hard to say which is the more to blame. But the practitioner will be greatly to blame if he allows this overbalance of values to continue. An accurate diagnosis depends on a careful analysis of history, physical findings, laboratory and x-ray data. The man who accepts a flat diagnosis from a urine or blood report, or from the roentgenologist, is not realizing his own place in the cosmos.

A trend has already set in toward a better evaluation of clinical medicine; and the practitioner as a student of disease processes, rather than a mere therapist, is an individual of the very near future. There is no question as to the importance and vast scope of the work that lies before him. To the rank and file of the profession, much of the greatest advance in medicine in the future ought to be credited.

In conclusion: This presentation has been offered with the idea of developing 2 main theses.

(1) That indigestion is a much neglected early symptom which always calls for a careful estimate of the patient's physical condition, and that such investigation will result in a surprisingly large number of positive findings.

(2) That the study of early symptoms of disease offers an opportunity for research which the general practitioner is peculiarly fitted to develop. It is today the least explored field in medicine, and its investigation and clarification ought to be in the future the practitioner's great contribution to medicine.

POLIOMYELITIS, BULBAR TYPE; REPORT OF 5 CASES

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The purely bulbar form of Heine-Medin's disease, according to epidemiologic studies of recent years, does not represent a major part of the total number of cases reported, and in sporadic instances this type is regarded by some authors¹ as quite rare. Frost², in a study of an outbreak of poliomyelitis in Iowa, in 1910, states that 10% of the 70 cases in which the distribution of the paralysis was ascertained, were of the purely bulbar type. In a similar study by Frost³, in Cincinnati, in 1911, the incidence was 13%. These figures may not, however, represent the true frequency of this form, for, in view of our recent experiences we are convinced that the purely bulbar form of Heine-Medin's disease is often not recognized and not reported, especially in sporadic instances, and so the published figures give an erroneous impression of its relative infrequency.

Some months ago, one of us was called to see a boy aged 2 yr., who was convalescing from pertussis when he was again taken ill with fever, malaise and somnolence. Two days after onset of the new illness the child appeared acutely ill, the temperature was 101.5°, and there was alternate restlessness and apathy. An ineffective cough was present, swallowing was difficult and mucus filled the throat. Numerous râles were transmitted from the pharynx. Dyspnea was marked, with alae nasi type of breathing. The family physician's diagnosis of bronchopneumonia superimposed on pertussis, was concurred in, although the findings were not at all typical. After several days, the power of deglutition returned and the boy slowly made an uneventful recovery. In view of our later experiences with the cases cited below, we are now

convinced that this diagnosis was incorrect, and that this child represented an unrecognized, sporadic case of the bulbar form of poliomyelitis. Such errors are very instructive, and show the necessity of keeping in mind the occurrence of this disease in the absence of an epidemic.

It seems of interest, therefore, to report the following 5 cases of an acute febrile disease with meningeal symptoms and paralyzes of the bulbar nerves. These cases occurred within a period of 2 weeks, in a city of 140,000 population. Two of these cases were incorrectly diagnosed as pneumonia. Were it not for the occurrence at this time of a number of typical cases of the spinal type of poliomyelitis, these cases would probably not have been recognized as the bulbar form of this disease.

Case 1. D. S., a 5 yr. old boy, sickened 1 week prior to admission. He was listless, avoided play, and tired easily. Toward evening he complained of pain in the back of the neck and appeared feverish. The following 2 days he refused food and rested considerably. On the fourth and fifth days there was anorexia and vomiting. Pain in the sternal region and cough developed.

Two days before admission a physician found the child acutely ill. The temperature was 101°, and the pharynx was congested and filled with a large amount of mucus, making examination of the throat difficult. The voice was nasal in character. The following day there was difficulty in swallowing and regurgitation of liquids through the nose; temperature was 103°. Much mucus still filled the throat, causing dyspnea and producing an ineffective cough. The family physician's diagnosis was bronchopneumonia, mainly because of the respiratory embarrassment. Physical signs in the chest were unreliable; due to transmission of mucus râles from the pharynx.

On admission, examination revealed a poorly nourished and poorly developed child, acutely ill and apathetic. The sensorium was clouded, but he could be easily aroused and was well oriented. He lay on his side with knees slightly flexed and head slightly retracted. Respiration was normal in rate and rhythm; the chest and abdomen were normal.

Marked neck rigidity was present. Kernig's and Brudzinski's signs could be elicited, and both patellar reflexes were slightly exaggerated. A slight smoothness and flattening of the right side of the face and a slight drooping of the right angle of the mouth was noticeable. The boy was unable to swallow, and the fluids regurgitated through the nose. The voice was hoarse, with a distinct nasal tone. There was no evidence of other cranial nerve involvement.

The blood count on admission, when the temperature was 102.6° showed a leukocytosis of 18,500 with a relative increase in polymorphonuclear cells. The count repeated the following day, when the temperature was normal, had dropped to 11,700 with normal differential figures.

The findings of lumbar puncture performed on the day of admission, are listed in the table.

On August 22, the day after admission, the boy was able to swallow custard with some difficulty. Improvement was steady, and on September 8, the child was discharged as cured, with no residual palsies.

Case 2. W. C., a 2 yr. old boy, was admitted August 23, 1927, because of drowsiness and change in voice. Four days before admission he complained of pain in the back of the neck, and seemed inactive and drowsy. The following day his voice assumed a nasal tone and he could scarcely be understood. His appetite had been poor from the onset, but there was no difficulty in swallowing. He had not had diphtheria, sore throat, or any febrile disease previous to the present illness.

Examination on August 23, revealed a poorly developed, undernourished boy, very quiet and apathetic. The tonsils were hypertrophied, but showed no evidence of active inflammation. A suggestion of neck rigidity and of Kernig's and Brudzinski's signs were present. There were no other abnormal physical findings. Diagnosis of the bulbar type of poliomyelitis was made mainly because of recognition of the first case 2 days previously. The temperature on admission was 99°. Findings of lumbar puncture made after admission are given in the table. During his stay in the hospital no new nerve involvement oc-

curred, and his nasal tone improved slightly. He was discharged September 9, 1927.

Case 3. A. R., a 4 yr. old boy, sickened 4 days before admission, with fever and drowsiness; voice assumed a nasal tone, and difficulty in swallowing and breathing developed; fluids regurgitated through the nose. The family physician made a diagnosis of bronchopneumonia because of the fever, dyspnea and general appearance.

When seen in consultation August 26, 1927, the child appeared acutely ill. He was lying on his side with knees and thighs slightly flexed and head somewhat extended; was alternately restless and apathetic, but could be aroused and responded to questions. The pharynx was filled with mucus which interfered with breathing; unable to swallow and liquids regurgitated through the nose; voice had a nasal tone; no evidence of any other cranial nerve involvement; slight neck rigidity present. Kernig's and Brudzinski's signs were doubtful. Patellar and superficial reflexes were normal. The abdomen was slightly scaphoid, skin lax, and showed poor turgor. There was evidence of recent loss of weight. The temperature on admission was 103.6°. The day following admission the temperature was normal; he was more restless, however, and still unable to swallow. The spinal fluid findings on admission are listed in the table.

On August 28, gavage was necessary; there was evidence of twelfth and seventh nerve involvement, the tongue deviated to the right when extended, and the right side of the face showed some flattening. On August 31, for the first time, he was able to swallow a little custard. He continued to improve, and was discharged September 13, completely well.

Case 4. Ch. V., 6 yr. old boy, was taken ill August 2, 1927, with abdominal pain, headache, and general malaise. His symptoms were ascribed to eating green grapes the day before. Examination revealed a temperature of 102°, an apathetic state, and slight pharyngeal congestion. The next day there was definite nuchal rigidity, and positive Kernig's sign. On the third day he was rather somnolent, very irritable, the meningeal signs persisted, and a left-sided facial paralysis of the peripheral type appeared. There was no evi-

dence of any other cranial nerve involvement. Mobility of the extremities and tendon reflexes were normal. He was seen in consultation after a clinical diagnosis of tuberculous meningitis had been made by 2 attending physicians.

The spinal fluid findings are given in the table. From these findings we reported as follows: "Possible tuberculous meningitis, but in view of the normal sugar findings and absence of meningitic curve in the gold test, we are inclined to regard this as a probable case of bulbar form of poliomyelitis." Twenty-four hours later his general condition was

case of his brother, but asymetry had disappeared within 2 weeks from onset of the disease.

COMMENT

We observed within a period of 2 weeks, 5 cases of an acute febrile disease, starting with indefinite symptoms, and characterized later by slight meningeal signs and by bulbar involvement. In view of the season of the year, the occurrence at this time of 5 typical cases of acute anterior poliomyelitis in the same city, the spinal fluid findings, and the tendency to recovery, we feel that these cases all represent the purely bulbar form of Heine-

Case	Date	Fluid	Pressure	Cells per cu. mm.	Type of cell	Sugar	Nonne	Pandy	Ninhydrin	Colloid. Gold	Fibrin Clot	Wassermann
D.S.	8/21/	Clear	Normal	58	Mainly mononuclear	+	-	+	-	Not typical	-	-
	8/24/	Clear	Normal	180	mononuclear	+	-	+	-		-	
	8/30/	Clear	Normal	65	mononuclear	+	+	+	-		-	
W.C.	8/24/27	Clear	Normal	15	Mainly mononuclear	+	-	-		Not typical	-	
	8/25/27	Clear	Normal	50	mononuclear	+	-	-				-
	8/30/27	Clear	Normal	15	mononuclear	+	-	-				
A.R.	8/26/27	Clear	Normal	32	Mainly mononuclear	+	-	-		Not typical	-	
	8/30/27	Clear	Normal	25	mononuclear	+	-	-			-	-
Ch.V.	8/5/27	Clear	Normal	30	Mainly mononuclear	+	+	+		Luetic	-	
J.V.	8/10/27	Bloody from Trauma				Not examined						

Spinal fluid findings in 5 cases of the bulbar form of poliomyelitis

markedly improved; 48 hr. after lumbar puncture there was definite improvement of the facial paralysis; 3 days later the child appeared completely well.

Case 5. J. V., 4 yr. old, complained of sore throat on August 5, three days after the onset of his brother's illness, (case 4). No definite physical abnormalities were found. On August 9, temperature was 101°; headache, sore throat, and abdominal pain. Objectively, there was neck rigidity, facial paralysis of the peripheral type on the right side, hoarseness, and a general appearance resembling that of his brother. On August 11, the temperature was 102°. Regurgitation of fluids through the nose appeared and continued for 1 week. The meningeal and general symptoms improved within 48 hr. after lumbar puncture. Facial improvement was slower than in the

Medin's disease. Of the 5 cases, 4 showed facial nerve involvement during the acute stage; 3 had disturbances in deglutition, and in 2 of these the most pronounced symptom was accumulation of mucus in the throat, which interfered with breathing and produced dyspnea.

It is rather remarkable that among 10 cases of poliomyelitis observed and reported in this registration area from August 1 to September 9, 1927, 5 (50%) should have been of the purely bulbar type; a much higher incidence than has been previously reported.

It appears from the foregoing that this form of poliomyelitis may be more common than is generally supposed. The prevailing impressions that the bulbar form of poliomyelitis is relatively infrequent¹, and that the prognosis in this form is very unfavorable⁴, may be due

to the fact that in the presence of an epidemic only the severer cases are recognized and sporadic cases are missed entirely. In our first experience, several months before occurrence of the small outbreak of the disease, an incorrect diagnosis of pneumonia was made. Of the 5 cases here reported, 2 had been considered as pneumonia, which is apparently the most frequent diagnostic error; 1 was recognized because of the admission the day before of a more typical case; the fourth had been diagnosed as tuberculous meningitis; the fifth was readily recognized after proving the brother's illness.

SUMMARY

(1) In a small outbreak of 10 cases of poliomyelitis, 50% were of the purely bulbar type.

(2) Mildness of the illness made recognition difficult.

(3) The most common erroneous diagnosis was pneumonia.

(4) A probable sporadic case was missed entirely.

(5) The possibility of mild sporadic cases must be kept in mind.

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POSTOPERATIVE CARE OF PERINEORRAPHIES

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Our end-results in perineorrhaphies depend in large measure upon postoperative care. A few years ago, reviewing this subject, I found that one three-volume work on gynecology gives a paragraph of about 6 lines to postoperative care of repairs of the perineum. Another very recent book on gynecology mentions almost nothing of postoperative care. Still another work dismisses care with 3 lines; it treats the perineum by washing it, after

urination and defecation, with sterile water.

I know of nothing quite so disappointing and discouraging in surgery as to inspect an operative case of this kind after 5 or 6 days, great care having been exercised to coaptate, and find pus, with separation both of mucous membranes and skin. The perineum or vagina in which sloughing has taken place is far worse after than before operation, because the patient has lost so much mucous membrane. For this reason, I am attempting to give you some of the measures I have employed with success following vaginal and perineal operations. This technic is not new and is used with success in many clinics.

Preparation of the patient previous to operation consists of a douche of lysol or bichloride 1:10000 the night before and the morning of the operation, with an s.s. enema given the night before but not the morning of the operation. Such patients are all given morphin $\frac{1}{4}$ gr. and atropin $\frac{1}{100}$ gr. hypodermically, one-half hour previous to operation. At time of operation the vulva, buttocks and pelvic region are scrubbed with soap and water, followed by thorough scrubbing with alcohol, being careful to scrub the vagina. I never paint the vulva or the vagina with iodine, mercurochrome or any antiseptic solution. The ordinary methods of perineorrhaphy and colporrhaphy are used. For suture material I prefer chromic catgut for the mucous membrane and silkworm gut for the skin, though I have used chromic catgut with a subcuticular stitch for the skin. When the operation is completed, the perineum is thoroughly dried and iodiform gauze is lightly packed into the vagina. This is done for 2 reasons: (1) to absorb any bleeding or discharge which might come from the uterus, and (2) to act by pressure and thus control any oozing from the sutured mucous membrane. Dry dressings are applied to the vulva and the patient is placed in bed. The legs are not tied and the patient is allowed to move around the bed as freely as she will. Morphine, hypodermically, is given for 2 or 3 doses at 4 hr. intervals, so as to lock the bowels. Patients are not allowed to void, but are catheterized every 10 to 12 hours, and the vulvar pad is changed after every catheterization. No water is used at

any time. The diet is liquid for the first 2 days, followed by a soft diet for 5 days. The packing which was placed in the vagina following operation is left in place from 24 to 48 hours. After 24 hours, if the temperature reaches 100° by mouth, the packing is removed; otherwise, it is removed after 48 hours. On the eighth day all cutaneous sutures are removed, a soapsuds or oil enema is given, the patient is placed on a full diet and allowed to void. On the tenth day the patient is allowed out of bed and on the twelfth day is discharged. No douches are used and the perineum is never washed unless there is some extravasation of urine over the perineum, when it is washed with a saturated boric acid solution and thoroughly dried immediately. Occasionally a patient has difficulty upon catheterization and there is extravasation of urine at the time. If this occurs, patients are given atropin 1/100 gr. hypodermically, for 2 or 3 doses and usually there is no more difficulty. The postoperative treatment consists mainly in keeping the perineum dry.

Urologists criticize this method of treatment, because of the frequent catheterizations with probability of infection of the bladder. I have never had any difficulty of this sort. Occasionally patients complain of slight pain in the bladder following catheterization. This we have controlled by giving 20 gr. potassium citrate 3 times daily. This irritability is probably due to concentrated and acid urine. One other objection has been that such elaborate care is not necessary, that most of the perineorrhaphies do well with the old method of treatment. The answer to this is that any treatment, postoperative, pre-operative or operative, which gives us better end-results, is certainly worth following.

CHRONIC ARTHRITIS

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To properly consider this very comprehensive subject it becomes necessary to divide the types of disease into: (1) metastatic or infec-

tious; (2) hypertrophic or degenerative; (3) atrophic or proliferative.

To properly treat the disease, correct diagnosis as to type must be made, for upon proper classification depends the prognosis and treatment; which latter I might say is often extremely tedious and occasionally unsatisfactory.

Metastatic or infectious arthritis can occur at any age although it is most frequent before the age of 45, and it may involve one or more joints. As its name implies, it is secondary to some distant infection in the body. Often localized by trauma, and having existed for an indefinite period, the original focus may have burned itself out or have been removed and yet the involved joint may continue inflamed. This type manifests itself often in a subacute or chronic form of arthritis with frequent acute exacerbations, giving redness, heat, tenderness, pain and limitation of use, engrafted upon joints which already are limited in function. Moderate crepitation exists around the joint, not bony in character, and in the subacute stage a slight rise in temperature may be present. X-ray pictures often are negative but sometimes show a destructive change and in middle age an engrafted overgrowth of joint edges, i.e. a tendency to the hypertrophic type. Calcaneal exostoses are commonly found accompanying infectious arthritis.

Hypertrophic or degenerative arthritis is a disease of middle life, metabolic in origin, often accompanying the menopause, and made worse by postural abnormalities and excess weight. Occasionally this type is secondary to the infectious form but the history of a long existing malady and the appearance of the patient with his deformities lets one properly classify the condition. The x-ray picture here is typical. Rarely is it destructive; instead, it shows an overgrowth of bone, especially about the joint edges, sometimes going even as far as to form palpable exostoses.

Atrophic or proliferative arthritis occurs at any age, usually in early middle life, but occasionally a very intractable form occurs in early childhood and is known as "Still's disease". We do not know the cause in this class but it is felt to be metabolic. It is a progres-

sive disease, rarely influenced by treatment, and manifests itself clinically by fusiform swelling of joints, flexion contractures, marked limitation of motion, and pain worse on use but usually constant and aching in character. The x-rays show obliteration of joint spaces and a marked increase in the calcium deposited along the articulating surface; giving an almost chalky appearance while the bone nearby shows atrophy.

Having classified the case properly we are able to go ahead with appropriate treatment and we soon see how unnecessary it is to remove teeth, tonsils, epididymi, appendices, and gall-bladders in every case. In infectious arthritis every possible diseased focus should be rendered innocuous, but with the hypertrophic or atrophic class only those lesions which interfere with general health and nutrition should be ablated, not with the idea of cure of the arthritis but with the thought of improving general health so that the patient's metabolic processes may be bettered and thus indirectly help overcome the disease.

No one line of procedure is a cure-all but from the orthopedic viewpoint the following are some general rules to be borne in mind, and I might say here that intelligent coöperation of the urologist, internist and orthopedist gives the patient the best outlook.

In the infectious type of disease rest of the affected joint or joints, by traction, splints, braces or casts, aspiration of any fluid which threatens integrity of the joint capsule, careful and complete removal of possible foci of infection and, when indicated, appropriate physiotherapy is the usual method of procedure. Salicylates are of no curative value and of all the drugs given by mouth iodides seem to be best. Foreign proteins and vaccines by hypodermic are often a great help but each case is a law unto itself. One thing we must not forget is that in splinting or putting any joint at rest be sure the position of the affected joint is the most useful one should ankylosis ensue, as it sometimes does; the knee should not be left in flexion, the elbow not in extension, the foot not in equinos, the wrist not in palmar flexion, and the shoulder not at the side.

In hypertrophic arthritis the great value of

the combined treatment by internist and orthopedist asserts itself, for these patients usually are overweight, sluggish as to body functions, and, in addition to complaining of definite pains and deformities in the lower extremities, they have constant dull backache. Here feet must be supported properly, varicose veins kept empty, knees held extended by braces or plaster, pendulous abdomens held up by proper corsets, and physiotherapy given. Here, however, this remedy gives only symptomatic relief. The great burden falls on the internist to cut down the weight by diet, and thyroid extract if indicated, decrease sugar specifically, have done away with any foci of infection which might prevent return of the patient to a very excellent state of general health. It is surprising how with relief of postural defects and improvement in general metabolism these patients promptly improve; but here also each case requires exhaustive study to remove all contributory factors.

In the atrophic type of disease our hands are tied as to curative ability. Most of these patients are thin, under nourished, and, of course, miserable. Their muscles are atrophic, their joints enlarged and tender, and the peri-articular structures swollen and contracted. Here the internist is called again to improve the general nutrition to the fullest extent by whatever means he deems advisable. Deformities are not to be permitted to advance, for once having arrived they are very difficult to relieve; in fact, at times impossible because of contractures of adjacent vessels and nerves. Physiotherapy is of great value to improve nutrition of the joints and development of the controlling muscles. In the presence of marked pain, motion is almost impossible but with rest of the part properly applied motion soon becomes painless and it is most important that this motion be kept up within the limits of causing pain; otherwise fibrous ankylosis with its secondary pathologic dislocations soon takes place. Nonweight-bearing motion is far more beneficial than weight-bearing motion and, furthermore, this latter is often risky while the joints are still somewhat painful. Stiffness after sitting for a long while is a common complaint and to dismiss it with "work it out" is a serious mistake for in reality it is

sign that instead of increased motion the involved joint should be put at rest.

The happy medium of rest and motion while at times hard to arrive at, still is the important thing for which to strive in this type of disease.

The popular lay conception that "rheumatism" is the fate of all of us and that little or nothing but drugs can be given for relief, and that "arthritis" is a terrible, incurable disease, should be exploded without delay and should the medical profession give each case the detailed attention it warrants there would be fewer "cures" advertised in our newspapers and the cults that make inroads on our chronic cases would be less prosperous.

FOCAL INFECTION IN ARTHRITIS

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The term "focal infection" does not define a clinical entity, but rather describes the bacteriologic, pathologic, and chemical processes involved in the invasion and localization of pathogenic bacteria in the body. The etiologic relation of pathogenic bacteria to infectious diseases, both local and general, has been definitely established by bacteriologic studies, while clinical observation and laboratory work have explained much of the mechanism of such infection in systemic diseases.

Diseases of joints constitute the oldest form of pathologic disturbances of which we have any record. Arthritis and the so-called rheumatic disturbances occurred even during the stone age, and there is ample evidence that they affected many forms of life before man existed; and, at the present time arthritis probably occurs more commonly and is more widespread than any other disease to which human beings are subjected. Until recently this cause of suffering and disability has not been afforded its full clinical importance but in the near future more attention will be paid to its prevention and treatment. Arthritis and rheumatism develop in individuals in al-

most any condition and quite often attack those who seem perfectly well.

The infectious nature of many arthritic and rheumatoid conditions remained obscure until about 20 years ago, although there is evidence that in certain isolated cases its nature was suspected much earlier. In fact, Hippocrates referred to the rôle of focal infection, and Benjamin Rush, in 1819, cited a case of disease in which this was clearly the cause.

The focus of infection may be either primary or secondary; the primary being the principal, or first, infected area from which the pathogenic agents gain entrance into the blood or lymph stream to cause systemic or organic disease; the secondary, an area of infection which has been supplied, by the blood or lymph channels, from the primary focus and may then serve to supply toxin to other regions.

A focus of infection may be acute or chronic. If the invading pathogenic agents are virulent and in sufficient numbers, the reaction is severe and the systemic disturbance relatively violent. If they are of low virulence, the reaction is less destructive, often mild in character, and provokes much less bodily disturbance.

In acute rheumatic arthritis, or acute rheumatic fever, the specific microorganism is a coccus, whose variant strains may assume the characteristics of a diplococcus or streptococcus. The work of Poynton and Paine, and others, has conclusively established the specific pathologic character of the diplococcus (*Streptococcus rheumaticus*). It has been obtained, and artificially cultivated, from foci of infection in the tonsils, alveolar abscesses, infected accessory sinuses, abscesses involving the nails of fingers and toes, infected lymph-nodes and other infected tissues. It has also been obtained from the stools, urine, blood and joint exudates of patients suffering from acute rheumatic fever. Its virulence is not great; it is not pyogenic and hence it never causes destruction of the joints; an important point to remember in treating rheumatic fever.

The mode of infection is by the blood, generally, or the organism may lodge in terminal blood-vessels and excite tissue reaction in the form of small local hemorrhages and sero-

fibrinous exudate, which in due time results in connective tissue proliferation and plastic adhesion of serous surfaces. Rosenow was the first to isolate the characteristic organism from the joint exudate in the first few days of the disease. These organisms do not remain in the joint very long; they disappear by autolysis and the joint exudate becomes sterile. The tonsils are the most common site of such foci of infection. This has been noted for many years and some practitioners of the past have recognized certain types of tonsillar infection as rheumatic and applied the remedies usually utilized in rheumatism in treatment of the local throat infection. The attack of rheumatic fever may be practically coincident with the exciting tonsillitis, or it may not develop for weeks or months subsequently. The focus of infection in the tonsil may be so mild that the patient is unaware of it.

In the temperate zone, rheumatic fever occurs most frequently during the Fall, Winter, and Spring, when changeable cold and wet weather prevails. It occurs most frequently in the young and in the more exposed males of all ages. Excess of lymphoid tissue in the pharynx of children is conducive to tonsillar inflammation, nasopharyngitis and sinusitis at the same seasons of the year. The prevalence of foci of infection is coincident with the increased susceptibility to general infection, due to exposure to cold and dampness. One attack does not confer immunity to further attacks, indeed the primary attack seems rather to increase susceptibility to the disease. Removal of the apparent etiologic focus usually prevents subsequent attacks of rheumatic fever.

If it should recur it may be concluded that the real focus has been missed or there has been more than one primary focus; or that a secondary focus of hematogenous origin has developed.

Endocarditis may occur coincidentally with the general systemic infection or during convalescence. In children, especially, endocarditis may occur without any joint swelling having been observed. These patients usually reveal a history of focal infection in the tonsil.

Myocarditis is a common incident in rheu-

matic fever, only recognized clinically when associated with slight enlargement and systolic murmurs, or with cardiac incompetency. The blood stream is supplied from foci of infection located in the tonsils, dental alveoli, and gall-bladder or elsewhere.

Chronic infectious arthritis, may be due to the specific microorganisms of typhoid fever, tuberculosis, gonorrhoea, syphilis, or strains of streptococci of low virulence. With the exception of traumatic infectious arthritis, the condition is always typical of focal infection. The etiology of tuberculous and gonorrhoeal arthritis will not be considered in this paper.

The organisms reach the joint through the blood stream and lodge in the terminal vessels of the periarticular tissues of the subserosa and of the branches of the nutrient artery which ends in the epiphysis. The reactions are consistent with the virulence of the infectious organism; cellular infiltration blocks the small vessels; local hemorrhage occurs; a serofibrinous exudate causes edema and swelling of the periarticular tissues; and, the synovial sac is more or less filled with serofibrinous fluid. The infection may be confined to the periarticular tissues, may be a simple synovitis, or may occur as a panarthritis, usually termed osteo-arthritis. The virulence of the invading organism and the number which primarily reach the joint tissues, determine severity of the symptoms. If virulence be high, the onset may resemble rheumatic fever with multiple arthritis. If virulence be low, the onset is often insidious and the signs are those of slight involvement of distal joints, usually in the periarticular tissue. These severe types are progressive and the character of the morbid changes is designated by the terms atrophic or proliferative. The milder types are usually associated with morbid changes of a hypertrophic or degenerative nature. Clinical observations show that the joints of one patient may present examples of all types of arthritis.

Long observation and study of these joints, including clinical, laboratory and postmortem investigation, convince one that focal infection affords the only rational explanation of this problem. In these patients it is usually pos-

sible to demonstrate foci of infection somewhere in the body.

With the primary changes involving blood-vessels and interfering more or less with blood supply of the involved tissues, a degree of ischemia may follow which is consistent with starvation or malnutrition. Malnutrition leads to secondary metabolic changes, in all joint structures, fibrous tissue, cartilage and bone. With continued and perhaps increased malnutrition, the metabolism becomes retrograde in character and promotes changes of the connective tissue group, tendons, cartilage and bone. The character of the toxin, which is dependent upon the resistance of the invading bacteria and the gradually increasing malnutrition of the joint tissue, may be the determining factor of the morbid anatomic conditions—proliferative, or atrophic, degenerative or hypertrophic. Failure to eradicate the focus of infection, the source of continued or intermittent bacteremia, is one factor in the progressive character of chronic infectious arthritis, as well as of other chronic infectious organic diseases. Neglect of proper treatment permits the disease to progress until retrograde metabolism and continued invasion of the infection have resulted in irreparable anatomic damage to the joints. Thus it seems that the relation of chronic focal infection to chronic arthritis is definitely established.

Case 1. Patient, male, aged 37, was confined to bed for 14 months, running continued fever all this time. He had a generalized arthritis of hands, feet, ankles, knees and spine, and couldn't move head. Pain was so severe that he would warn attendants not to jar the bed. He was seen by many of his fellow doctors and specialists. His teeth were examined by a dentist and said to be in good condition. Many diagnoses were offered: arthritis deformans; septicemia; pyelitis; abscess of spleen, because it was enlarged; chronic appendicitis. They looked for sub-diaphragmatic abscess, and for syphilis on laboratory tests alone. Lost weight to the extent of 100 lb. He was confined to his home for 14 months. Appendectomy was done; gall-bladder removed; tonsils removed. At the end of 14 months he was pronounced in danger of death from septicemia. Then

he was admitted to hospital. His teeth were examined by the hospital dentist, and he could see an abscess of central incisor. X-rays showed both upper central incisors diseased. These were removed, and 19 days after their removal the temperature became normal, patient commenced to gain weight and now he is back to normal and has no pain in the joints.

Case 2. Female, aged 72, had polyarthritis and was told she would have to endure this the rest of her days because she was too old to operate on. She had suffered for 6 years. She also had attacks of anginoid pains which she termed heart attacks. The diseased tonsils and 2 infected teeth were taken out and since their removal she has not had a single twinge of pain and the heart attacks have cleared up also.

Case 3. A boy, aged 14, while playing football received an injury to his right knee and was told to put hot applications on joint. Although swelling improved, the pain in the joint remained. A few days later the other knee became involved and all the time he had temperature running from 99.1° to 101.3°. He was given salicylates for about 3 weeks, without any improvement as regards the pain. Two surgeons were asked to see the boy to exclude the possibility of tuberculosis. The mother of the child asked if it might be due to his tonsils, because they were enlarged. Both surgeons advised against anything being done to the tonsils, because the knees might become worse. After a period of 6 weeks, during which time the child was never free from fever, the tonsils were removed. Twenty-four hours after their removal the temperature became normal, and never went above 99° during his 5 day stay in the hospital. Pain in the joints also disappeared, and, being since seen on repeated visits, he has never had any illness since tonsils were removed.

Case 4. Patient, man aged 64, had arthritis in right shoulder for 3 years, diagnosed as bursitis, neuritis, myositis. His throat was examined by a specialist who did not think the tonsils were abnormal in spite of the fact that pus could be expressed from each tonsil. Pain bothered him so that he had to give up

golf. Then he sought another specialist and this one advised removal of the tonsils, which were small, imbedded and infected. The original surgeon offered to remove the tonsils to prove them normal. As soon as snare was adjusted, pus flew in all directions. Two weeks later the patient was playing golf and there has been no trouble in the shoulder since operation.

Case 5. Male, aged 3. Child would cry out at night as result of pain in knees, first one then the other. For a period of 3 months he was looked at by several men and they could not determine cause of the pains. Laboratory work was all done but because of extreme youth the teeth were not x-rayed. Then the mother asked the father if an upper central incisor tooth could be the cause. This tooth was a little discolored as result of an injury when the child fell out of a high chair. The tooth was x-rayed and an abscess found at the root. Tooth was extracted and there has not been any pain since.

GONOCOCCUS ARTHRITIS

DAVID F. BENTLEY, M.D.,
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The occurrence of acute inflammation of the joints, dependent upon gonorrheal infection, is now generally conceded to be a true instance of metastatic gonococcal infection. For a number of years there was considerable controversy as to whether this was merely a toxic manifestation, and not a true instance of blood stream dissemination. Failure of many observers to demonstrate the gonococcus in fluid aspirated from affected joints lent much support to this view. It has now been shown that the gonococci are usually found in the synovial membrane, rather than in the joint itself, and that when they are in the joint they are present but for a short time.

Clinically we speak of 2 types of gonorrheal arthritis—acute and chronic—and it is with the former that I shall chiefly concern myself. There are several good authorities

who deny the existence of a chronic type, and prefer to regard the condition as a chronic arthritis of toxic nature, having causative foci in the genito-urinary tract.

The acute type offers no especial difficulty in diagnosis. We have a patient who develops an acute, usually polyarticular, arthritis, during the course of an attack of gonorrhea; Thomas recently stated that 58% of all cases were polyarticular. After a beginning in several joints, the usual course is for the infection to settle in 1 or 2 joints, and there stay until it subsides. The knee is the joint most often involved; after that, the order of involvement is ankle, hip, wrist, shoulder, phalangeal, metatarso-phalangeal, metacarpophalangeal, elbow and spine. Occurrence of arthritis in the tempero-maxillary, or sterno-clavicular articulations, is very suggestive of gonococcal origin.

There are usually only mild constitutional symptoms, and the presence of high fever, chills and sweats is nearly always indicative of secondary infection.

Local swelling and pain is great. Sensitiveness is very marked. There is much swelling or edema in the tissues about the joint. This latter point, Ely considers to be pathognomonic of this disease. In the joint itself the synovial membrane is inflamed, succulent, and often villous. The exudate may be purulent or serous, but usually becomes fibrinous or plastic; not infrequently resulting in such dense fibrous adhesions that joint motion is markedly limited or even destroyed.

Treatment resolves itself into 2 parts: First, treatment of the primary underlying focus; secondly, treatment of the joint condition itself. The patient should be put to bed, so as to insure absolute rest. The genito-urinary focus should be treated as actively as the local condition will permit. Usually there is an acute anteroposterior urethritis associated with prostatitis and seminal vesiculitis. This is probably best handled by conservative methods, and with improvement of the local infection there is improvement in the arthritis also.

The method of Belfield for medication of the vesicles is useful and not very difficult

to perform. The simple vasopuncture recommended by B. A. Thomas is extremely difficult. Recently, Cunningham and Smith, of Boston, have advised seminal vesiculectomy, and prostatotomy has been recommended in some cases. Most urologists are satisfied with vesical irrigations and prostatic massage. In addition to these measures the judicious administration of vaccines is of value.

For management of the joint condition, it is best to be guided by the orthopedist. He usually orders splinting, with or without traction. If there is sufficient effusion into the joint to produce tension, and the resulting pain, he may advise aspiration, and occasionally the injection of a small quantity of formalin and glycerin into the joint. The use of Bier's hyperemia, baking and massage, diathermy, and passive motion all have value at the proper time.

In the chronic arthritides due to foci of infection, it should be remembered, when searching for tonsillar and dental foci, that it is very easy to include a rectal examination; and often all that is needed is a little pressure on the prostate to show the presence of pus. It is often gratifying to have these cases clear up under systematic prostatic massage. The prognosis of the acute gonococcal arthritis should at best be guarded. Unless the greatest care be observed in management of this condition, there is apt to be extensive thickening and fibrosis, associated with loss of function, and occasionally complete ankylosis. If, however, these cases are promptly recognized, and the proper treatment instituted, it is not unusual for the condition to subside without too great damage having been done.

TUBERCULOUS OTITIS MEDIA

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One of the most interesting features of this condition is the way in which the patient comes to the hands of the practitioner. To cite a

typical case: A patient of mine had noticed that his hearing was slightly below normal for a few days. He also had a feeling of fullness. Believing it to be wax, he took a dry applicator, tipped with cotton, and attempted to wipe out the canal, but noted, on its removal, that there was no wax but a thin serous fluid. Upon examination, the ear drum was found slightly reddened, with a large perforation, and secreting a thin, serous fluid which in a few days changed to a thick exudate of pus. This case is typical of many that we see in our work, in that, while he had suffered no pain, he had when first seen a large perforation with pus flowing freely.

As to portal of entry of the tubercle bacillus into the middle ear, by far the most common is through the eustachian tube, the germs probably being driven through during the act of coughing or sneezing. The situation of the tonsils and adenoids, which are not uncommonly affected, adds greatly to this possibility of infection through the tube. Bacilli may also enter through the lymph or through the blood stream. Speaking of this direct implantation through the eustachian tube, it is worthy of note that most observers report from 15 to 20% of advanced cases of lung tuberculosis as having either single or double otitis media. The pathology produced by entrance of the tuberculosis bacillus into the middle ear is approximately the same as in other parts of the body; namely, the formation of the tubercle and the subsequent melting down of the bone. This bone destruction in the ear is sometimes very extensive as well as rapid. Destruction of the bony capsule covering of the facial canal is not uncommon. The labyrinthine capsule is also occasionally perforated. Meningitis, however, is a rare complication because of resistance of the dura to the tubercle bacillus. The same is true of sinus thrombosis, as the blood-vessels are also very resistant.

Diagnosis. With the typical case, diagnosis is rather easy. However, one may have the ordinary pathogenic bacteria implanted at the same time as the tubercle bacillus. In this class of case we have the ordinary otitis media with pain, swelling, redness and rupture of

the drum, and the true tuberculous condition not suspected until healing does not take place at the normal time. Demonstration of the tubercle bacillus in the aural discharge is difficult, as in all other parts of the body. Animal inoculation is rarely possible, as the other pathogenic bacteria usually complicate the tubercle bacillus and cause death of the animal before results can be obtained. In chronic otitis media, the tubercle bacillus is a large factor, being given as the cause of 50% of the chronic cases of infants under 1 yr. of age and gradually decreasing until in adult life it is slightly over 2%.

To Summarize. We have a person with known, or suspected, lung tuberculosis complaining of a chronic discharging ear. The type of discharge is usually thin and serous, occasionally blood streaked, and usually with a fetid odor. This discharge is pouring out of one large perforation or out of several small ones. The ear drum is generally a dull, reddish color, showing extensive granulations. One may also be able to detect, and occasionally remove, small spicules of bone.

Treatment. As the lung tuberculosis is generally well advanced, operation under ether is out of the question, but if necessity arises it may be done under gas-oxygen. It is, therefore, advisable to attempt to find some means of medication which will help. So far as I can find out, I believe every known drug has been used in the treatment of such ears, all with the same negative results. Apparently, the best treatment that we now have is heliotherapy, some men using a mirror and reflecting the sunlight directly into the ear canal; beginning with about 30 seconds twice a day and carrying it up until as much as 15 to 20 minutes. Where this is not practicable, the short wave quartz mercury light may be used, but with great caution. As the course of the ear condition follows the patient's general condition, the best results are obtained by directing all efforts to improvement of the lung condition and merely doing what is necessary in the ear to tide over until such time as improvement in the health of the patient will permit the ear to heal.

EARLY DIAGNOSIS OF ACUTE MASTOIDITIS

E. REED HIRST, M.D.,
Camden, N. J.

The early diagnosis of acute mastoiditis is very important for proper care of the patient. Unfortunately, a great many cases of acute mastoiditis are not recognized until far advanced, thus prolonging suffering of the patient and very often making the required mastoid operation more extensive than it should have been.

As to etiology, little need be said here; it follows acute colds, tonsillitis, pneumonia, influenza, all the acute exanthemas, and sometimes follows trauma. It may also occur as an apparently primary condition, but this is not common. As a matter of fact, nearly all of the suppurative middle ear inflammations probably involve the mastoid cells and antrum. It is chiefly in cases where free tympanic drainage is interfered with that mastoid symptoms become manifest.

The symptoms are chiefly those of pressure from retention of secretions within the mastoid cells; they are pain, tenderness on pressure over the mastoid, fever, and a discharge of pus from the external auditory canal. Pain varies in intensity; in some cases it is almost negative and in others very severe. It is generally continuous and of a dull aching and boring character, which may intermit with sharp lancinating pains radiating over the temporal region, neck, shoulder, occiput and face. Mastication may be very painful. Adults can tell you the character and location of their pain, but infants and very small children can not. Sometimes a crying and fretful child will, if watched closely be found to be pulling at the affected ear.

One of the first indications of mastoid involvement is tenderness over the mastoid, but this symptom varies in different cases as to amount and location. In some cases there may be almost no tenderness, in others it may be very marked; the degree of tenderness depending upon several factors, among which are

the acuteness of inflammation, the extension of the process, and the thickness of the bone cortex and periosteum. The method of examining for tenderness is of great importance. There are 2 kinds of tenderness, superficial and deep. The superficial tenderness is of little value as you can obtain this in any inflammatory condition of the external auditory canal. It is the deep tenderness which you want to elicit as a diagnostic sign. The best way to do this is to have the patient facing you and make equal pressure over both mastoids at the same time with the ball of your thumb, starting up over the antrum and working downward. The eyes should be carefully watched, for no matter whether it be an adult who does not complain of pain or a young child who is crying, upon obtaining tenderness the eye of the affected side will flinch. Tenderness may be found over the antrum and nowhere else, or it may be found over the whole mastoid or just over the tip. Tenderness over the mastoid tip should mean that the cortex is thick over the antrum and that there is free drainage there, or the cortex at the tip is thin, or that there may be retained pus in the cells at that point. If the tenderness has spread posteriorly, the assumption may be that the posterior cells and even those behind the lateral sinus plate are involved.

Temperature varies, ranging anywhere from 98° to 104°. Do not put too much stress on lack of elevation of temperature in making your diagnosis. On the other hand, temperature of 103° or 104°, with the other findings of mastoiditis usually indicates that there are some serious complications taking place.

Discharge of pus into the external auditory canal from the middle ear is present in the ordinary case of acute mastoiditis. In some cases there may be no discharge, but there is pain and tenderness present. Upon examining the canal it is normal in appearance but the tympanic membrane is found to be bulging. Upon incising such a membrane and relieving the pressure, the pain and tenderness very often clear up.

Do not depend upon the color of the drum-head for incising it, for in the past season a great number of cases have been seen in which

it has been normal in color, or only partly inflamed, yet distinctly bulging.

The above symptoms are the main ones to be looked for. In recent journals a new list of symptoms have been described as appearing in infants. Lyman, Dean, Schwartz, and others have been describing infantile mastoiditis with gastro-intestinal symptoms; marked loss of weight or failure to gain weight, vomiting, diarrhea, anhydremia and extreme toxicity with a septic temperature of 104° to 105°. These symptoms do not yield to any regulation of feeding, nor are they due to any enteric infection. These reports date back to work covering 4 years. The infants, 18 days to 18 months old, died with the above gastro-intestinal symptoms and while routine autopsies disclosed no lesions in the intestinal tract, in all of these cases pus was found in the mastoid antrum. In all cases of gastro-intestinal character which do not yield to regulation of feeding the ears should be carefully examined.

Swelling behind the ear is a typical picture of acute mastoiditis as published in most of the text-books. Do not wait for this to take place for while you are waiting grave complications may set in. Pus always travels in the line of least resistance and, breaking its way through the mastoid cells and cortex, finds its way under the periosteum to cause swelling over the mastoid. Now, the pus can travel at times in the opposite direction, that is up to the middle fossa of the skull and through to the brain, giving rise to brain abscess and meningitis; and not infrequently that is the direction of least resistance. In some very virulent infections swelling over the mastoid may take place in a few hours but this type of case is not often seen.

Diagnosis of mastoiditis depends first upon tenderness over the mastoid process; second upon examining the external auditory canal. The external auditory canal may be filled with pus or normal in appearance. When the pus is removed you most always see a central or anterior perforation of the tympanum, which varies in size from a pin-point to a well rounded out perforation involving one-third or more of the membrane. Sometimes canal and tympanum are inflamed and the canal wall shows

a drooping of the posterior-superior part. This drooping gives a narrowing at the inner-end of the canal and this alone is enough to make the diagnosis of mastoiditis, for drooping of the superior-posterior wall of the canal is caused by pus penned up in the antrum and attic. Comparison of both canals should always be made in order to give you the true size and shape of the affected side.

In some cases the canal and tympanum may be absolutely normal in color and contour, but the patient has pain and tenderness, and you have to be guided by an x-ray picture.

You must not be deceived if one or more of the main points in diagnosis are lacking; collect what points you have and compare them with the x-ray findings for the latter may be a very valuable aid in the diagnosis of mastoiditis; all cases should be x-rayed before operation.

One condition which simulates acute mastoiditis is furunculosis of the external auditory canal. In this latter condition you get a superficial tenderness with a narrowing of the anterior part of the canal; in mastoiditis it is the posterior part of the canal which is in-

involved. The auricle may stand out from the head in both conditions. X-ray report in furunculosis may be confusing, as it sometimes shows a cloudiness of the mastoid cells that can very readily be mistaken for mastoiditis.

In summing up, the main points in diagnosis of acute mastoiditis are:

- (1) Pain, boring and constant in character.
- (2) Tenderness over the mastoid process.
- (3) Discharge of pus in the external auditory canal.
- (4) Drooping of the posterior-superior part of the external auditory canal wall.
- (5) Pulsation seen through the perforation in the tympanum.
- (6) Bulging over the mastoid in very virulent infections or far advanced cases.
- (7) X-ray findings.

One or more of these signs may be lacking or they may all be present. Watch the acute suppurative otitis media cases very carefully, for bone involvement, so that we may have earlier diagnosis of acute mastoiditis and operations with less complications.

Given a month to live if he continued at work, or a possible three months if he rested in Florida, Ernest Harold Baynes chose to keep working. The following poem, written shortly before he died, appeared in *The Outlook* a few days after his death. Its spirit may suggest Henley's famous "Invictus", with an added poignancy drawn from real life. (Reprinted from *Literary Digest*).

THE LAST RACE

BY ERNEST HAROLD BAYNES

I have the mount on Courage to-day,
And Death is riding the White,
Through the paddock gate, with a smile at fate,
To the track in the slanting light.

The odds on Death are short, they say,
And how shall a sportsman choose?
There is just one test, you must ride your best,
Then you win, if you win or lose.

We face the flag on our hill-rimmed course,
It falls to a perfect start,
No waiting race—we must set the pace,
The pace that will break his heart.

On the long back stretch we lead by a length,
Old Courage asserting his pride,
Till Death shows fight and calls on the White:
He rides! for he *has* to ride.

As we swing to the straight, we are still in the van,
My horse at the top of his speed,
With Death's coming fast—we are nearing the last,
And the last is already decreed.

The horses, lapped to their saddle girths,
Rush through like a storm-swept fire—
Death wins! Bravo! But I laugh in his face,
As he noses me out at the wire.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

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ANNUAL CONVENTION

Owing to the fact that the Annual Meeting occurs this year so early in the month, the May Journal was denominated the "Convention Number", and we hope every member gave it due consideration, read the presessional reports and studied the scientific program particularly. This coming meeting ought to be the largest the State Society has ever held. Certainly the program presents inducements enough. We cannot recall a program of recent years that approaches in excellence the one just presented. The Program Committee is to be congratulated upon the feast proffered, and commended for the tremendous amount of work performed. Really, we have 3 distinctive programs of high class scientific offerings; the general medical and surgical; the pediatric; and the ophthalmic and otorhinologic; a total of 46 papers, of which 6 are by guests—eminent members of the profession from other states.

It is expected that the Woman's Auxiliary will aid materially in swelling our attendance record, for that body has also an attractive program.

The plans for this meeting were predicated upon the basis of providing something of interest for each and every member, and this seems to have been accomplished even to the provisions for social entertainment.

Come! Join in making this convention "a howling success".

COUNTY SOCIETY PROGRAMS

We have been interested observers of the efforts made in some counties to develop local talent in construction of the scientific pro-

grams. On general principles, that society which is self-contained and self-reliant is apt to be most healthy from an organization point of view. For at least 4 years the Morris County Society has been devoting one or more meetings per annum to symposiums upon selected topics, different aspects of the subject being assigned to chosen members and a sufficient time allowed for each to work up his paper, and we have previously expressed admiration for the excellent results obtained. During the past winter the Camden County Society has employed a similar plan; the May Journal contains one of their symposiums, consisting of 4 papers on the subject of "fractures", and this month we present their symposium on "arthritis". In both of the counties mentioned the plan has worked advantageously and we commend it to the consideration of those society secretaries who complain of difficulty in arranging programs. The method not only helps the secretary and provides for an interesting meeting, but it greatly benefits the individual members who have to study their subject in order properly to present it; just as all work in the nature of teaching is apt to benefit the teacher even more than the pupil.

CORRECTION

Typographic errors are bound to occur occasionally in any periodical, just as other faults appear "in the best regulated families". Sometimes such errors are amusing, rarely they are serious, always they are aggravating to the Editor if to nobody else. When the meaning is obvious, a mistake in spelling, spacing or punctuation is of little import. When, however,

the mistake results in confusion or, worse still, distortion of the true meaning, the error is more serious in character and calls for correction.

An error of the last mentioned type appeared in the May Journal, in Dr. Martin's paper, (page 331, column 2, line 26) where we made the author speak of "atrophic action" instead of "a trophic action"; omitting to put a space between the article "a" and the word "trophic".

We hereby apologize to the author and request readers to revise their copy in the manner indicated.

NATIONAL LEGISLATION

During recent months the medical profession has been much concerned over 2 items in the Internal Revenue Tax bill under consideration by the National Congress. One of these was a proposition to increase the tax for license to prescribe narcotics, under the Harrison Narcotic Act, raising the fee from \$1. to \$3. The other relates to the long continued fight to secure just treatment in the matter of deducting from gross income money expended for travel expenses when attending medical conventions. A rule made in the Treasury Department deprived physicians of a privilege granted to members of other professions and to all other business men; a rank injustice which the departmental autocrats have repeatedly refused to correct. The proposed increase in license tax would have been another glaring piece of class legislation or imposition.

The American Medical Association has been very busy through its legal bureau and its representative at Washington in efforts to correct the one fault and to prevent another. Our State Society has given what aid it could, by explaining the situation to Senators and Representatives from New Jersey and urging them to support the reasonable demands of the profession.

Just as we go to press a telegram is received from Senator Edwards that the Senate has voted down the \$3 tax, and the day's paper announces that the Senate has overthrown the Finance Committee recommendation and voted to permit physicians to deduct professional travel expenses.

Medical Ethics

PROGRESS AND PERSONALITY

John Hammond Bradshaw, M.D., F.A.C.S.,
Orange, N. J.

To explain our *raison d'être*, we must go back a few millions of years. It is absurd to confuse simianity with humanity. No monkey, even with the help of aeons of years, could ever have become a man. He never was our progenitor. That bit of protoplasmic matter (call it a blot of slime, if you will) was the earliest biologic evidence of the human race. Origin by fiat might satisfy the moronic mentality of the wards of the early theologians; but even their conception and portrayal of this origin was positively human and not divine. It is as stupendous a conception to conceive that man started from the first spark, the first living germ, and has, by the grace of God, advanced to his present status as it is to hold that man's genesis was as narrated in the Bible by the descendants of the Son of Abraham. Neither are we ashamed to doubt that God gave Adam an anesthetic and created woman from his rib.

Bryanism is dead, almost as defunct as the now silent silver-tongued orator himself. It is doubtful if heresy trials based on belief in evolution could now stand exposure to present day enlightenment and progress.

When we consider *personality*, we have indeed a large order. Cell memory (in other words, heredity) here plays a most important part. Some seem lacking in this rich endowment. It is a plant to be tenderly nurtured and defended from all harm. The aim of our best educators is to develop personality.—in other words, to make *men*. If you are naturally endowed, your journey will have a minimum of strain and stress. You are almost, moreover, at a cruel advantage over those less highly gifted. And conversely, if personality is lacking one is sadly handicapped. One's talents in all directions must be great in deed if this handicap is to be overcome. This is especially true of physicians, for he who owns this winning trait too often outstrips in the race for success those whom the scientific mind considers decidedly more worthy.

Esthetics

SHOULD DOCTORS TELL THE TRUTH?

Joseph Collins, M.D.,
New York City

(Reprinted, with permission, from Harper's Magazine, August, 1927.)

This is not a homily on lying. It is a presentation of one of the most difficult questions that confront the physician. Should doctors tell patients the truth? Were I on the witness stand and obliged to answer the question with "yes" or "no", I should answer in the negative and appeal to the judge for permission to qualify my answer. The substance of this article is what that qualification would be.

Though few are willing to make the test, it is widely held that if the truth were more generally told, it would make for world-welfare and human betterment. We shall probably never know. To tell the whole truth is often to perpetrate a cruelty of which many are incapable. This is particularly true of physicians. Those of them who are not compassionate by nature are made so by experience. They come to realize that they owe their fellow-men justice, and graciousness, and benignity, and it becomes one of the real satisfactions of life to discharge that obligation. To do so successfully they must frequently withhold the truth from their patients, which is tantamount to telling them a lie. Moreover, the physician soon learns that the art of medicine consists largely in skillfully mixing falsehood and truth in order to provide the patient with an amalgam which will make the metal of life wear and keep men from being poor shrunken things, full of melancholy and indisposition, displeasing to themselves and to those who love them. I propose therefore to deal with the question from a pragmatic, not a moral standpoint.

"Now you may tell me the truth," is one of the things patients have frequently said to me. Four types of individuals have said it: those who honestly and courageously want to know so that they may make as ready as possible to face the wages of sin while there is still time; those who do not want to know, and who if they were told would be injured by it; those who are wholly incapable of receiving the truth. Finally, those whose health is neither seriously disordered nor threatened. It may seem an exaggeration to say that in 40

years of contact with the sick, the patients I have met who are in the first category could be counted on the fingers of one hand. The vast majority who demand the truth really belong in the fourth category, but there are sufficient in the second—with whom my concern chiefly is—to justify considering their case.

One of the astonishing things about patients is that the more serious the disease, the more silent they are about its portents and manifestations. The man who is constantly seeking assurance that the vague abdominal pains indicative of hyperacidity are not symptoms of cancer often buries family and friends, some of whom have welcomed death as an escape from his burdensome iterations. On the other hand, there is the man whose first warning of serious disease is lumbago who cannot be persuaded to consult a physician until the disease, of which the lumbago is only a symptom, has so far progressed that it is beyond surgery. The seriousness of disease may be said to stand in direct relation to the reticence of its possessor. The more silent the patient, the more serious the disorder.

The patient with a note-book, or the one who is eager to tell his story in great detail, is rarely very ill. They are forever asking, "Am I going to get well?" and though they crave assistance they are often unable to accept it. On the other hand, patients with organic disease are very chary about asking point blank either the nature or the outcome of their ailment. They sense its gravity, and the last thing in the world they wish to know is the truth about it; and to learn it would be the worst thing that could happen to them.

This was borne in upon me early in my professional life. I was summoned one night to assuage the pain of a man who informed me that he had been for some time under treatment for rheumatism — that cloak for so many diagnostic errors. His "rheumatism" was due to a disease of the spinal cord called locomotor ataxia. When he was told that he should submit himself to treatment wholly different from that which he had been receiving, the import of which any intelligent layman would have divined, he asked neither the nature nor the probable outcome of the disease. He did as he was counselled. He is now approaching seventy and, though not active in business, it still engrosses him.

Had he been told that he had a disease which was then universally believed to be progressive, apprehension would have depressed him so heavily that he would not

have been able to offer the resistance to its encroachment which has stood him in such good stead. He was told the truth only in part. That is, he was told his "rheumatism" was "different"; that it was dependent upon an organism quite unlike the one that causes ordinary rheumatism that we have preparations of mercury and arsenic which kill the parasite responsible for this disease, and that if he would submit himself to their use, his life would not be materially shortened, or his efficiency seriously impaired.

Many experiences show that patients do not want the truth about their maladies, and that it is prejudicial to their well-being to know it, but none that I know is more apposite than that of a lawyer, noted for his urbanity and resourcefulness in Court. When he entered my consulting room, he greeted me with a bonhomie that bespoke intimacy, but I had met him only twice—once on the golf links many years before, and once in Court where I was appearing as expert witness, prejudicial to his case.

He apologized for engaging my attention with such a triviality, but he had had pain in one shoulder and arm for the past few months, and though he was perfectly well—and had been assured of it by physicians in Paris, London, and Brooklyn—this pain was annoying and he had made up his mind to get rid of it. That I should not get a wrong slant on his condition, he submitted a number of laboratory reports furnished him by an osteopath to show that secretions and excretions susceptible of chemical examinations were quite normal. His determination seemed to be to prevent me from taking a view of his health which might lead me to counsel his retirement. He was quite sure that anything like a thorough examination was unnecessary but he submitted to it. It revealed intense and extensive disease of the kidneys. The pain in the network of nerves of the upper-arm was a manifestation of the resulting autointoxication.

I felt it incumbent upon me to tell him that his condition was such that he should make a radical change in his mode of life. I told him if he would stop work, spend the winter in Honolulu, go on a diet suitable to a child of 3 years, and give up exercise, he could look forward confidently to a recovery that would permit of a life of usefulness and activity in his profession. He assured me he could not believe that one who felt no worse than he did should have to make such a radical change in his mode of life. He impressed upon me that I should realize he was the kind of person who had to know

the truth. His affairs were so diversified and his commitments so important that he must know. Completely taken in, I explained to him the relationship between the pain from which he sought relief and the disease, the degeneration that was going on in the excretory mechanisms of his body, how these were struggling to repair themselves, the procedure of recovery and how it could be facilitated. The light of life began to flicker from the fear that my words engendered, and within 2 months it sputtered and died out. He was the last person in the world to whom the truth should have been told. Had I lied to him, and then intrigued with his family and friends, he might be alive to-day.

II

The longer I practice medicine the more I am convinced that every physician should cultivate lying as a fine art. But there are many varieties of lying. Some are most prejudicial to the physician's usefulness. Such are pretending to recognize the disease and understand its nature when one is really ignorant; asserting that one has affected the cure which nature has accomplished, or claiming that one can effect cure of a disease which is universally held to be beyond the power of nature or medical skill; pronouncing disease incurable which one cannot rightfully declare to be beyond cessation or relief.

There are other lies, however, which contribute enormously to the success of the physician's mission of mercy and salvation. There are a great number of instances in support of this but none more convincing than that of a man of 50 who, after 25 years of devotion to painting, decided that penury and old age were incompatible for him. Some of his friends had forsaken art for advertising. He followed their lead and in 5 years he was ready to gather the first ripe fruit of his labor. When he attempted to do so he was so immobilized by pain and rigidity that he had to forego work. One of those many persons who assume responsibility lightly assured him that if he would put himself in the hands of a certain osteopath he would soon be quite fit. The assurance was without foundation. He then consulted a physician who without examining him proceeded to treat him for what is considered a minor ailment.

Within 2 months his appearance gave such concern to his family that he was persuaded to go to a hospital, where the disease was quickly detected, and he was at once submitted to surgery. When he

had recovered from the operation, learning that I was in the country of his adoption, he asked to see me. He had not been able he said, to get satisfactory information from the surgeon or the physician; all that he could gather from them was that he would have to have supplementary x-ray or radium treatment. What he desired was to get back to his business which was on the verge of success, and he wanted assurance that he could soon do so.

He got it. And more than that, he got elaborate explanation of what surgical intervention had accomplished, but not a word of what it had failed to accomplish. A year of activity was vouchsafed him, and during that time he put his business in such shape that its eventual sale provided a modest competency for his family. It was not until the last few weeks that he knew the nature of his malady. Months of apprehension had been spared him by the deception, and he had been the better able to do his work, for he was buoyed by the hope that his health was not beyond recovery. Had he been told the truth, black despair would have been thrown over the world in which he moved, and he would have carried on with corresponding ineffectiveness.

The more extensive our field of observation and the more intimate our contact with human activity, the more we realize the finiteness of the human mind. Every follower of Hippocrates will agree that "judgment is difficult and experience fallacious". A disease may have only a fatal ending, but one does not know; one may know that certain diseases, such as general paresis, invariably cause death, but one does not know that tomorrow it may no longer be true. The victim may be reprieved by accidental or studied discovery or by the intervention of something that still must be called divine grace.

A few years ago physicians were agreed that diabetes occurring in children was incurable; recently they held that the disease known as pernicious anemia always ended fatally but now, armed with an extract from the pancreas and the liver, they go out to attack these diseases with the kind of confidence that David had when he saw the Philistine approach.

We have had enough experience to justify the hope that soon we shall be able to induce a little devil who is manageable to cast out a big devil who is wholly out of hand—to cure general paresis by inoculating the victim with malaria, and to shape the course of some varieties of sleeping sickness by the same means.

I am thankful for many valuable lessons learned from my early teachers. One of them was an ophthalmologist of great distinction. I worked for 3 years in his clinic. He was the most brutally frank doctor I have known. He could say to a woman, without the slightest show of emotion, that she was developing a cataract and would eventually be blind. I asked a colleague who was a co-worker in the clinic at that time and who has since become an eminent specialist, if all these patients developed complete opacity of the crystalline lens.

"Not one-half of them," said he. "In many instances the process is so slow that the patient dies before the cataract arrives; in others it ceases to progress. It is time enough for the patient to know he has cataract when he knows for himself that he is going blind. Then I can always explain it to him in such a way that he does not have days of apprehension and nights of sleeplessness for months while awaiting operation. I have made it a practice not to tell a patient he has cataract."

"Yes, but what do you tell them when they have been to Doctor Smith who tells them they have cataract and they have come to you for denial or corroboration?"

"I say to them, 'You have a beginning cloudiness of the lens of one eye. I have seen many cases in which the opacity progressed no farther than it has in your case; I have seen others which did not reach blindness in 20 years. I shall change your glasses, and I think you will find that your vision will be improved.'"

And then he added, "In my experience there are 2 things patients cannot stand being told: that they have cataract or cancer."

There is far less reason for telling them of the former than the latter. The hope for victims of the latter is bound up in early detection and surgical interference. That is one of the most cogent reasons for bi-yearly thorough physical examination after the age of forty-five. Should we ever feel the need of a new law in this country, the one I suggest would exact such examination. The physician who detects malignant disease in its early stages is never justified in telling the patient the real nature of the disease. In fact, he does not know himself until he gets the pathologist's report. Should that indicate grave malignancy no possible good can flow from sharing that knowledge with the patient.

It is frequently to a patient's great advantage to know the truth in part, for it offers him the reason for making a radical

change in his mode of life, sometimes a burdensome change. But not once in a hundred instances is a physician justified in telling a patient point blank that he has epilepsy, or the family that he has dementia præcox, until after he has been under observation a long time, unless these are so obvious that even a layman can make a diagnosis. We do not know the real significance of either disease, or from what they flow—we know that so many of them terminate in dementia that the outlook for all of them is bad. But we also know that many cases so diagnosed end in complete recovery and that knowledge justifies us in withholding from a patient the name and nature of his disorder until we are beyond all shadow of doubt.

Patients who are seriously ill are greedy for assurance even when it is offered halfheartedly. But those who have ailments which give the physician no real concern often cannot accept assurance. Not infrequently I have been unable to convince patients with nervous indigestion that their fears and concern were without foundation, and yet, years later when they developed organic disease, and I became really concerned about them, they assured me that I was taking their ailments too seriously.

There was a young professor whose acquaintance I made while at a German university. When he returned he took a position as professor in one of the well-known colleges for women. After several years he consulted me for the relief of symptoms which are oftentimes associated with gastric ulcer. It required no elaborate investigation to show that in this instance the symptoms were indicative of an imbalance of his nervous system. He refused to be assured and took umbrage that he was not given a more thorough examination each time that he visited me. Finally he told me that he would no longer attempt to conceal from me that he understood fully my reasons for making light of the matter. It was to throw him off the track, as it were. No good was to be accomplished from trying to deceive him; he realized the gravity of the situation and he was man enough to confront it. He would not show the white feather, and he was entitled to know the truth.

But the more it was proffered him, the greater was his resistance to it. He gave up his work and convinced his family and friends that he was seriously ill. They came to see me in relays; they also refused to accept the truth. They could understand why I told the patient the matter was not

serious, but to them I could tell the facts. It was their right to know, and I could depend upon them to keep the knowledge from the patient and to work harmoniously with me.

My failure with my patient's friends was as great as with the patient himself. Fully convinced his back was to the wall, he refused to be looked upon as a lunatic or a hypochondriac and he decided to seek other counsel. He went from specialist to naturopath, from electrotherapist to christian scientist, from sanatorium to watering place and, had there been gland doctors and chiropractors in those days, he would have included them as well. Finally, he migrated to the mountains of Tennessee, and wooed nature. Soon I heard of him as the head of a school which was being run on novel pedagogic lines; character-building and health were the chief aims for his pupils; scholastic education was incidental. He began writing and lecturing about his work and his accomplishments, and soon achieved considerable notoriety. I saw him occasionally when he came north and sometimes referred to his long siege of ill-health and how happily it had terminated. He always made light of it, and declared that in one way it had been a very good thing: had it not been for that illness he would never have found himself, never have initiated the work which was giving him repute, happiness, and competency.

One summer I asked him to join me for a canoe trip down the Allegash River. Some of the "carry" in those days were rather stiff. After one of them I saw that my friend was semi-prostrated and flustered. On questioning him, I learned that he had several times before experienced disagreeable sensations in the chest and in the head after hard manual labor, such as chopping trees or prying out rocks. He protested against examination but finally yielded. I reminded myself how different it was 15 years before when he clamored for examination and seemed to get both pleasure and satisfaction from it, particularly when it was elaborate and protracted. He had organic disease of the heart, both of the valve-mechanism and of the muscle. His tenure of life depended on the way he lived. To counsel him successfully it was necessary to tell him that his heart had become somewhat damaged. He would not have it. "When I was really ill you made light of it, and I could not get you interested. But now, when I am well, you want me to live the life of a dodo. I won't do it. My heart is quite all right, a little upset no doubt by

the fare we have had for the past 2 weeks, but as soon as I get back to normal I shall be as fit as you are, perhaps more so."

We returned to New York and I persuaded him to see a specialist, who was no more successful in impressing him with the necessity of careful living than I was. In despair, I wrote to his wife. She who had been so solicitous, so apprehensive, and so deaf to assurance during the illness that was of no consequence wrote, "I am touched by your affectionate interest, but Jerome seems so well that I have not the heart to begin nagging him again, and it fills me with terror lest he should once more become introspective and self-solicitous. I am afraid if I do what you say that it might start him off again on the old tack, and the memory of those 2 years frightens me still."

He died about 4 years later without the benefit of physician.

III

No one can stand the whole truth about himself; why should we think he can tolerate it about his health, and even though he could, who knows the truth? Physicians have opinions based upon their own and others' experience. They should be chary of expressing those opinions to sick persons until they have studied their psychology and are familiar with their personality. Even then it should always be an opinion, not a sentence. Doctors should be detectives and counsellors, not juries and judges.

Though often it seems a cruelty, the family of the patient to whom the truth is not and should not be told are entitled to the facts or what the physician believes to be the facts. At times, they must conspire with him to keep the truth from the patient, who will learn it too soon no matter what the skill they display in deception. On the other hand, it is frequently to the patient's great advantage that the family should not know the depth of the physician's concern, lest their unconcealable apprehension be conveyed to the patient and then transformed into the medium in which disease waxes strong—fear. Now and then the good doctor keeps his own counsel. It does not profit the family of the man whose coronary arteries are under suspicion to be told that he has angina pectoris. If the patient can be induced to live decorously, the physician has discharged his obligation.

IV

I recall so many instances when the truth served me badly that I find it difficult to select the best example. On reflection, I

have decided to cite the case of a young man who consulted me shortly after his marriage.

He was sane in judgment, cheerful in disposition, full of the desire to attract those who attracted him. Anything touching on the morbid or "unnatural" was obviously repellent to him. His youth had been a pleasant one, surrounded by affection, culture, understanding, and wealth. When he graduated he had not made up his mind what he wanted to do in the world. After a year of loafing and traveling he decided to become an engineer. He matriculated at one of the technical schools, and his work there was satisfactory to himself and to his professors.

He astonished his intimates shortly after obtaining a promising post by marrying a woman a few years older than himself who was known to some of them as a devotee of bohemian life that did not tally with the position in society to which she was entitled by family and wealth. She had been a favorite with men but she had a reputation of not being the "marrying kind".

My friend fell violently in love with her, and her resistance went down before it. His former haunts knew him no more, and I did not see him for several months. Then, late one evening, he telephoned to say that it was of the greatest importance to him to consult me. He arrived in a state of repressed excitement. He wanted it distinctly understood that he came to me as a client, not as a friend. I knew, of course, that he had married. This, he confessed, had proved a complete failure, and now his wife had gone away with another woman, one whom he had met constantly at her home during his brief and tempestuous courtship.

I attempted to explain to him that she had probably acted on impulse; that the squabbles of early matrimony which often appeared to be tragedies, were adjustable and, fortunately, nearly always adjusted.

"Yes," said he, "but you don't understand. There hasn't been any row. My wife told me shortly after marrying me that she had made a mistake, and she has told me so many time since. I thought at first it was caprice. Perhaps I should still have thought so were it not for this letter." He then handed me a letter. I did not have to read between the lines to get the full significance of its content. It set forth briefly, concretely, and explicitly her reasons for leaving. Life without her former friend was intolerable, and she did not propose to attempt it longer.

He knew there were such persons in the world, but what he wanted to know from me was, could they not, if properly and prudently handled, be brought to feel and love like those the world calls normal? Was it not possible that her conduct and confession were the result of a temporary derangement and that indulgent handling of her would make her see things in the right light? She had not alienated his love even though she had forfeited his respect and he did not attempt to conceal from me that if the tangle could not be straightened out he felt that his life had been a failure.

I told him the truth about this enigmatic gesture of nature, that the victims of this strange abnormality are often of great brilliancy and charm, and most companionable; that it is not a disease and, therefore, cannot be cured.

In this instance, basing my opinion upon what his wife had told him both in speech and in writing, I was bound to believe that she was one of the strange sisterhood, and that it was her birthright as well as her misfortune. Such being the case, I could only advise what I thought might be best for their mutual and individual happiness. I suggested that divorce offered the safest way out for both. He replied that he felt competent to decide that for himself; all that he sought from me was enlightenment about her unnatural infatuation. This I had only too frankly given him.

Two days later his body with a pistol wound in the right temple was found in a field above Weehawken.

That day I regretted that I had not lied to him. It is a day that has had frequent anniversaries.

Medical Economics

THE NAME, PLEASE?

(Reprinted from *Medical Economics*,
January, 1928.)

In a reception room visited recently, the office attendant, new and possibly inexperienced in her position, marched up to a woman who just had entered and seated herself, and asked: "Do you want to see Doctor So and So?"

The woman nodded and the girl immediately rushed back to her desk, gathered

up a pad of paper and with pencil poised called across the room: "Your name? Your address? Have you a telephone?" To all these questions the woman replied promptly though plainly embarrassed at this cross-examination before all the other patients in the waiting room. It was like talking on a four-party line with everybody listening.

And when the attendant finally called out: "What is your occupation, please?", the woman arose and crossed over to the desk. She looked distressed for a moment, hesitated, fingering worn gloves, and then answered in a frigid tone, "I don't care to state just now what I am doing, if it isn't absolutely necessary for you to know. I only wanted to consult the doctor about my little girl's getting a health card to return to school. Never mind, though, I won't wait."

And with an offended, hurt air, she made her exit.

Thus this attendant, aiming to get helpful data for the doctor had instead lost a patient for him. All because she lacked tact in approaching new patients!

How to ask the questions required on a patient's first call is a problem in itself. It is natural for people to feel constrained and ill at ease on first consulting a doctor, and a number of questions pelted at them at the start, vastly increases their discomfort and may even offend them, if not put tactfully.

In another doctor's office I have in mind, questions are asked in a way that does not offend or seem awkward, because the attendant has been trained. She has learned how to do it gracefully. Her method is well worth considering for it adds to the efficiency of the office, satisfying both patient and physician.

When a new patient enters the waiting room, this attendant comes forward, smiling, and asks, "Did you want to see the doctor? Did you want to make an appointment or did you have one?"

And to either question, she adds, "Well just be seated, please and I will take your name, address and so forth."

Standing by the patient and talking low, she asks the necessary questions, writing them down on a card held within her appointment book, explaining that it saves the doctor's time as well as the patient's and gives the patient more chance to talk when seeing the doctor if these preliminaries are over.

Then slipping out of the room, she consults the doctor, leaving the card with its data for him, and returns to set an hour for the patient then or later. Carefully recording it in her appointment book, she gives the patient the reassured feeling that he is receiving special attention rather than unpleasant publicity.

When the patient is ushered into the doctor's office, he does not have to repeat all this data because the doctor has the card before him. It becomes much easier for both patient and physician. A greeting by name is possible and all awkward introductions are dispensed with.

This same card is used to get other information regarding the case—the patient's history—details of his ailment or complaint being put down as the doctor hears them.

These cards are filed away alphabetically in a regular filing index and are consulted each time the patient calls, data being added as is necessary. Thus the cards furnish a complete history of each case as well as a record of the account of each patient, helpful when bills are being made out.

Of course, there are many systems of indexing, filing and cataloguing that doctors may use, but the simplest system is always the best. That is the one likely to be favored by the busy physician, who usually has only one assistant, office girl, book-keeper and secretary combined. And if a doctor has no attendant, a card index is certain to be of help, saving him from the habit of jotting down various "memos" here and there, that are likely to be missing when most needed!

In this regard I am reminded of a physician who is particular to the finest degree in his medical practice but heedless of office detail. Consequently he is constantly annoyed, and annoys patients likewise hunting for names, addresses and data that he has jotted down somewhere. Valuable time is consumed during the rush of his office hours while he searches for some slip of paper, and he invariably ends up by remarking, "Well I guess I'll have to write that down again" or "If I am to call in the morning I'll have to jot your address down. I guess I've mislaid it."

This habit sometimes makes patients feel that a doctor does not bother much about them, when in reality he may spend much time in careful study. System pays in every office, whether it is the professional or the business man's office.

In Lighter Vein

Another Try

Would-be Contributor—Here's my manuscript which I offered you a year ago.

Editor—But if I refused it a year ago, what's the use of bringing it back now?

Contributor—Well, you have had a year's experience since then.—Weekly Telegraph.

Revived

A recently appointed vicar, in his first sermon, spoke severely against betting. After the sermon was over a parishioner told the clergyman that one of the wealthiest members of his congregation was a notorious gambler. The vicar, not wishing to begin badly, approached the rich man after the service, and said:

"I'm afraid I must have offended you today, but—"

"Don't mention it," was the answer. "It's a mighty bad sermon that doesn't hit me somewhere."—London Daily Chronicle.

At the hour of birth, says an authority, human intelligence stands at the zero mark. Which proves that some adults weren't always as dumb as they are now.—San Diego Union.

Nize Baby

"What's an operetta?"

"Don't be foolish—it's a girl who works for the telephone company."—Denver Clarion.

The nation's doctor bill is now a million and a half a day, but apples are not cheap, either. What to do? What to do?—The New Yorker.

Lives of great men all remind us,
As their pages o'er we turn,
That we're apt to leave behind us,
Letters that we ought to burn.

—California Pelican.

Star-Wangled Hammer

Tom—"What do you think of Coolidge's Pan-America policy?"

Jerry—"I thought the Pan-America policy was Mencken's."—Life.

Writ Like the Dickens

An Oriental paper, having an English section, printed the following notice:

"The news of English we tell the latest. Writ in perfectly style and most earliest. Do a murder commit, we hear of it and tell it. Do a mighty chief die, we publish it and in border somber. Staff has each been colleged and write like the Kipling and the Dickens. We circle every town and extortionate not for advertisements."

—Christian Advocate.

Dolled Up

The bride wore a becoming costume being a string of pearls.—Corpus Christi (Tex.) paper.

Observations from the Lighthouse

Active Principles of the Posterior Lobe of the Pituitary

The manifold physiologic activities of extracts of the posterior lobe of the pituitary gland are now well known; namely, their effect in stimulating uterine contractions (oxytocic activity), their ability to raise the blood pressure (pressor activity), and their diuretic-antidiuretic effects (renal activity). These three types of activity have led the way to three definite and important medical applications; these are illustrated respectively by the use of pituitary solutions in obstetrics, in the treatment of surgical shock, and in the control of diabetes insipidus.

A recent report from the research laboratory of Parke, Davis and Company (Jour. Am. Chemical Soc., 50:573, 1928) describes a series of new experiments designed to settle the disputed question as to whether there is more than one active principle in the posterior lobe of the pituitary gland, and the very interesting outcome of these investigations. The whole can be most succinctly explained by quoting the summary of that report.

(1) The posterior lobe of the pituitary gland contains two important active principles: one which raises blood pressure and another which stimulates contraction of uterine muscle.

(2) A substantially complete separation of these two active principles has been accomplished by the employment of salting-out methods and, subsequently, by the use of appropriate solvents and precipitants.

(3) Solutions of these separated active principles have been recombined to form a pituitary extract identical with the original from which they were prepared, thus proving that no decomposition has taken place.

(4) The substantially pure pressor principle (B-hypophamine) has been obtained in the form of a white, stable, water-soluble powder 80 times as potent as the International Standard Powdered Pituitary.

(5) The separated oxytocic principle (a-hypophamine) has been obtained in the form of a white, stable, water-soluble powder which is more than 150 times as potent as the International Standard Powdered Pituitary.

(6) The pressor principle has been shown to be responsible for the diuretic-antidiuretic action of pituitary extracts.

(7) The pressor principle when tested on animals for demonstration of pressor effects shows the development of tolerance which is characteristic of active pituitary extracts. It has been shown to possess no appreciable depressor action.

(8) Both active principles are basic bodies, presumably amines.

(9) Practical manufacturing methods have been developed for the separation of these two hormones and they have been made available to the medical profession for careful clinical trial.

(10) As a result of this preliminary work the foundation is now laid for an investigation of the chemical nature of the separated hormones of the posterior lobe of the pituitary gland, together with a more exhaustive study of their pharmacologic properties.

Treatment of Acute Epididymitis

In a paper entitled "Observations on the Physiology and Therapy of the Seminal Duct" (Jour. A. M. A., 89:2104, Dec. 17, 1927) Belfield and Rolnick report a study of the secretory and excretory functions of the epididymis and seminal vesicles, and an attempt to influence infections of the duct, such as epididymitis and vesiculitis, by chemicals introduced into the blood. The work is summarized as follows:

(1) The proteins secreted by the epididymis and seminal vesicles, and passing thence into the bladder may be sufficient in amount to show a precipitate in the urine by heat and nitric acid, though urine obtained at the same time through urethral catheters may not show any.

(2) It is demonstrated that certain substances introduced into the blood of the dog are excreted by the body of the epididymis, and, introduced into man, are found in the seminal vesicles.

(3) In 15 of 30 persons with nontuberculous prostatovesiculitis refractory to standard medical treatment, all evidence of infection was promptly abolished by a few injections of neo-arsphenamin or sulpharsphenamin.

(4) The usual failure of current medical treatment to cure chronic prostatovesiculitis, and the arthritis or iritis secondary thereto, has compelled extensive resort to surgical therapy. Our limited observations corroborate Lauterman's larger experience and prompt the hope that internal medication with the arsphenamins may furnish a larger percentage of cures than has hitherto been achieved by nonsurgical treatment.

In the same Journal (page 2108) Meredith Campbell presents a study of 3000 cases of epididymitis, with special reference to treatment, arriving at the following conclusions:

Rest in bed with splinting of the scrotal contents by the adhesive suspensory bandage and application of ice cap (all without urethral treatment in gonorrhoeal cases) offer the best method for the nonsurgical treatment of acute epididymitis. Epididymotomy affords immediate relief from pain and is indicated in 1 of every 15 cases. On the average, the patient who is operated on is hospitalized only 3.7 days longer than the one in whom operation is not performed. The adhesive scrotal compression bandage assists admirably in preventing postoperative scrotal hematomas. Most complications result from secondary infection. Loss of the testis causes greatest anxiety. Careful follow up has, in a rather limited series of cases, indicated that sterility is less frequent in the bilaterally involved organs subjected to epididymotomy.

Glant Wanted

An Eastern movie magnate visited his studio, where one of the companies was making a picture dealing with France during the last days of the Revolution.

He spied the actor impersonating General Bonaparte—for the sequence being filmed had to do with the suppression of the mobs in Paris by the future Emperor.

"Who's the guy?" asked the film magnate, pointing to the actor.

"Why, that's Napoleon!" explained the director.

"Why did you get such a little man to play such an important part?" demanded the magnate.—New York Evening World.

Communications

TUBERCULOSIS IN NEWARK IN 1927

M. J. Fine, M.D.,

Director Tuberculosis Division, Health Department, Newark, N. J.

We are gratified to say that the tuberculosis death rate for 1927 was the lowest in the tuberculosis history of the city of Newark. Last year the rate was 91.5 per 100,000 and this year our mortality dropped to 82.9; lower than the 1925 rate, which was up to then the lowest Newark ever had. The death rate per 100,000 in 1915 was 215.8; so there has been a decrease in 12 years of 132.9 points.

The National Tuberculosis Association reports that the tuberculosis death rate for 1927 has been decreased throughout the country, and from 30 cities all over the United States the mortality has dropped to 85.6 per 100,000; the average decrease being 6% while our decrease was almost 10%.

I find the same reasons for reduction of the tuberculosis mortality as in previous years; better living conditions, people more alert for the early symptoms, better follow-up of members of the families that are reported as having tuberculosis, and supervision of every reported case. Our mortality would have been much lower but for the great incidence of tuberculosis in the colored transient population. In 1926, there were 97 death among the colored people and in 1927, 112 deaths; showing an increase of 15 over the previous year.

Morbidity. As in mortality, the morbidity has similarly decreased. In 1926 there were 1014 cases reported, and this year there were 889 only. The greater the morbidity, the greater the mortality. If there had been a decrease of mortality and an increase of morbidity, we might call it only coincidence; but when a proportionate ratio between mortality and morbidity is obtained, there is actually a decrease both in the mortality and morbidity. From the difference of mortality in the colored race, we find that there are a lesser number of the cases reported, and a showing of lesser resistance to and greater virulence of the disease among the colored than among the white people; also that the whites are taking more advantage of periodic health examinations and go earlier to physicians. In a considerable number of the deaths among the colored, no physician had been in attendance.

Hospital and Sanatorium. It seems that a greater number of patients afflicted with tuberculosis are now seeking sanatorium care. The fear of institutions is waning and the anxiety for rest and fresh air is coming to the fore. We are still short of hospital beds, an additional number of which would give the reported cases a better opportunity for recovery. I am still of the opinion that temporary, inexpensive, fire-proof shacks of the Adirondack type could be used for many patients. Immediate relief is absolutely necessary, even if only sufficient care for the severely ill patients at present crowding the available beds at our City Hospital. The shortage is such that after a patient applies for sanatorium treatment, there is such a delay that by the time his name is reached we frequently find that he has become an advanced case, or has decided against taking advantage of the treatment,

or in some cases, has died. At all events, the condition has rarely been improving, and too often they have become discouraged and have been careless to the extent of spreading infection to relatives and intimate contacts.

This applies to the winter months; in summer patients have better opportunities to secure accommodations in the country with relatives, where they have good fresh air, and the sanatorium congestion is relieved.

Clinics. The attendance at clinics was 19,156; a trifle less than the previous year. Discovery of tuberculous cases through our clinics is well illustrated by the fact that of the 889 cases reported during the year, 162 were first discovered at our clinic.

The "Heart Clinic" that was established in conjunction with the "tuberculosis clinic" in the City Dispensary a few years ago has been a great aid in the discovery of early cases of tuberculosis. While it was conducted but once each week, we examined 362 cases, and quite a few tuberculous patients were found among those entered for heart disease. A great many cases were also discovered in the "Hay Fever and Asthma Clinic" which otherwise would not have been found.

Food Handlers. The food handler examinations are being continued and during the year we examined 13,112 persons. Of this number, 32 were rejected because of venereal disease, and 8 for active tuberculosis. There were 67 temporary cards issued to workers with inactive stages of these diseases.

I believe that the food handlers examined at the Health Department are fortunate in that they secure periodic health examinations every 6 months. This keeps them in perfect health without any cost to themselves, and at the same time protects the patrons of restaurants from disease. We found 447 suspicious cases this year, as compared with 1148 last year.

Home Visits and Follow-up Work. During the year, 19,169 home visits were made by our staff of nurses, compared with 15,690 last year; an increase of 3479 visits. This was due to the fact that we conducted a survey of the districts including Wards 1, 2 and 15. There were 4 nurses assigned to this work for a period of 18 days, and 3000 visits to homes were made. During this survey, 38 new cases of tuberculosis were discovered, which probably would not have been found in any other way; also a great number of other ailments, such as bronchitis, pleurisy and pneumonia, were found and referred to private physicians or to proper clinics for treatment. This work will be carried on every year and different districts will be surveyed for the discovery of early cases of tuberculosis.

A close follow-up of patients discharged from Glen Gardner, Verona and Farmingdale was carried out. The Glen Gardner Nurse made 1815 home visits, and the Verona Nurse 1362, showing that there had been a greater number of admissions and discharges which required more supervision.

Social Problem and Conclusion. I would again emphasize the fact that in most cases a cure can be obtained if the patient is assured of rest, fresh air, freedom from worry, and good food. In a great many instances, when the breadwinner is taken away from the family, the economic distress becomes greater because the family is left without a provider. In the coming year, I believe the burden of the Social Agencies will be much greater as the economic condition of the

country is worse. I feel that a pension should be given for dependents that are left at home. This would relieve the mind of the patient, which is a great factor in the curing of disease.

With the greater possibility of examining barbers and all parochial school children, making surveys, and increasing the bed capacity for tuberculous patients in the county and state, I believe that further decrease of mortality and morbidity will continue.

(Note.—Detailed statistical tables, covering every phase of the year's work can be secured from Dr. Fine by those who may be interested.—Ed.)

REPORT OF COMMITTEE ON RADIOLOGIC FRAUDS

(Part of a letter from the Editor of "Radiology", official publication of The Radiological Society of North America.)

Whereas: Certain practices are becoming prevalent in various parts of the United States, which threaten the welfare of radiology, affecting the practice of this branch of medical science in a peculiar, deleterious, and harmful manner, and

Whereas: It is an important function of any medical organization to protect its specialty from the harmful effects of improper, unethical, or dishonest practices,

Be It Resolved: By the Radiological Society of North America, in Executive Session at its Thirteenth Annual Meeting, that: (1) Radiologic diagnosis is a consulting specialty of medicine, the chief function of which is to aid practitioners of other specialties and of general medicine in the diagnosis and treatment of disease; (2) that it is improper and unethical for any radiologist or any organization practicing radiology to offer discounts or commissions, or other financial inducements, to attract patients either directly or through reference by other physicians; (3) that it is unethical for any radiologist or organization practicing radiology to make charges to referring physicians for services rendered, but that all such charges must be made against the patient for whom such services are rendered; (4) that a commercial x-ray laboratory is defined as one which advertises to make radiographic or fluoroscopic examinations for physicians and surgeons for the avowed or apparent primary purpose of financial gain; (5) that it is improper and unethical for any radiologist to become affiliated with a commercial x-ray laboratory; (6) that a stock company or corporation with physicians and surgeons as stockholders, offering dividends as an inducement to refer cases to a laboratory owned and operated by such company or corporation, is unethical, and that such dividends be regarded in the same light as commissions or discounts. A group of physicians may properly own and operate an x-ray department or laboratory, providing the earnings therefrom are employed for the advancement of the science of radiology or other branches of medicine or the maintenance and improvement of service to patients, but not as an inducement to stockholders to refer cases in the hope of receiving greater dividends.

Resolved, (7) That an x-ray laboratory is to be considered unethical if therefrom emanate diagnostic reports based upon the radiologic observations of technicians who do not possess a medical degree or license to practice medicine.

The mere signature of a physician to such reports is to be regarded as an evasion of this rule unless such signatory has actually made the observations and drawn the conclusions upon which such reports are based.

Be It Further Resolved: (1) That no radiologist engaging in unethical practice according to the above definition shall be eligible to membership in this society, and that no technician affiliated with an unethical or commercial laboratory shall be eligible to registration; (2) that a copy of these resolutions be forwarded to each state medical society with a request that they be published in the official Journal; (3) that a committee be appointed to obtain the official approval of these resolutions by the American College of Radiology, the American College of Surgeons, and the American College of Physicians.

ANTIDIPHTHERIA CAMPAIGN

The State-Wide Campaign for the protection of children against diphtheria is now rapidly progressing and will culminate in a uniform effort to make treatment available for every child in the State during October and November of this year, it was announced following a recent meeting of the Executive Council for the Prevention of Diphtheria in the Academy of Medicine in Newark.

The Committee was organized last October under the chairmanship of Frank J. Osborne, Health Officer, of East Orange, and has Governor A. Harry Moore as Honorary Chairman. Its membership comprises representatives of practically every state agency and organization in New Jersey, including the State Medical Society, New Jersey Tuberculosis League, Parent-Teachers' Association, Federation of Women's Clubs, Life Insurance Companies, State and City Health Departments and Service Clubs.

Similar committees are now in process of formation in all counties, by prominent physicians who have recently accepted county chairmanships. Chairmen will also proceed to enlist their fellow Medical Society members, a letter being sent to each member of county societies.

Headquarters for the State have been established in the office of the New Jersey Tuberculosis League, 21 Walnut Street, Newark, and a clearing house for each county will be opened in the office of the County Tuberculosis Association, centrally located Health Department, office of County Superintendent of Schools or other available center.

The organization of committees in every community will follow the meeting of the county group, and plans will be made for financing, usually by Boards of Health and Education. An intensive publicity campaign is planned for September, for which the Metropolitan Life Insurance Company is preparing a special film. A list of 57 prominent persons available as speakers before clubs and other groups has been sent to county chairmen.

Radio talks will also be arranged. A special speaker's handbook has been prepared; a press committee consisting of representative newspaper men will advise in the preparation of publicity.

The immunization of pre-school children will be stressed, as children between the age of 6 months and school age are known to be most

susceptible to the disease. This will be left in the hands of the family physician, although clinic facilities will be made available to parents unable to afford private treatment. Owing, however, to the large number of unprotected school children, most communities will probably arrange for school clinics which should serve the purpose of demonstration to the parents of younger children as well as insuring the protection of the pupils treated.

The success of the campaign is primarily dependent on cooperation of the state's physicians. The Essex County Medical Society has agreed to send letters to all members, furnish speakers, distribute pamphlets and posters through members' offices, endorse and publish endorsement, and prepare a series of articles for the press. It is anticipated that other organizations will be equally cooperative.

Physicians who have accepted appointments as chairmen are:

Atlantic County, Samuel Salasin; Bergen, Jos. R. Morrow; Burlington, Daniel F. Remer; Cape May, A. C. Crowe; Cumberland, Leslie E. Myatt; Monmouth, Harvey S. Brown; Morris, W. F. Costello; Ocean, Frederick N. Bunnell; Passaic, John Ryan; Salem, Wm. H. James; Somerset, Launclot Ely; Union, Arthur Stern; Warren, G. Homer Bloom; Gloucester, L. Warner Knight; Hudson, Charles A. Niemyer; Hunterdon, A. H. Coleman; Mercer, A. S. Fell.

Lay Mirror Reflections

MEDICAL EXPLORERS

New York Times, April 23, 1928.)

A Wilkins makes search for land in the waters about the North Pole, and after repeated failure achieves his purpose. A Byrd plans to explore at even greater peril the wastes of ice and snow at the other Pole. A Millikan searches the skies and descends into the waters under the earth to determine the nature and force of the rays that beat upon the world from the cosmos. But there are explorers, here in the midst of our city's millions, who in like spirit and with kindred courage, day after day and night after night, venture out into the realms of the unknown, thinking not of their own comfort or compensation, but only of what they may bring back for the enlargement of truth, or, like Prometheus, give to man as "alleviations of his state". Among such explorers are Dr. William H. Park and his associates who are setting out today upon a three-year expedition to discover if possible the means and methods of preventing or controlling infantile paralysis. An immense amount of study has been given already to this problem, but though the microorganism which causes the disease is known, the possibility of developing an anti-serum vaccine "is a question of doubt". Yet there is hope.

The realization of that hope could hardly be possible without a special fund for the support of extensive as well as intensive research and experiment. This has happily been assured through the gift of Mr. Jeremiah Milbank of \$250,000. Grants are to be made to 4 of the leading universities of America and 2 abroad (with the prospect of enlisting later the assistance of

others), so as to encourage independent investigations, the results of which will be later coordinated. This research supplements what the city is doing in its own health laboratory, which under the direction of Dr. Park since 1894, has become, according to a statement made by Professor Winslow of Yale University, "the most important municipal public health laboratory in the world". It has exerted an almost inestimable influence throughout the United States. The city has been a thousand-fold compensated for what was spent through its college for the early training of its Director. And it is not to be forgotten that this laboratory was started by Dr. Hermann M. Biggs, who also inaugurated the state health laboratories.

One by one contagious diseases are being brought under measurable control. Dr. Park stated 2 years ago that we had only 1 case of smallpox in New York, and that one came to the city from outside. It is believed to be possible, with general immunization, to put an end to diphtheria in a few years. The ravages of scarlet fever may now also be stayed. It is estimated that more than 100,000 people now living in New York City will be living a year from now who would have been dead except for what the health laboratories have done to save and prolong life. It cannot be doubted that the field of control will be extended and that poliomyelitis will be prevented from laying its paralyzing hand upon children. Prometheus, according to tradition, told the hidden power of herbs and springs, drinking of which "disease slept"; but while this dreaded disease, which is both endemic and epidemic and which comes and goes without periodicity, may have some sleep or stay by herb or spring, it will be banished only, as others, by the serum of the scientists' laboratories.

CHIVALRY—MEDIEVAL AND MODERN

(From "The Kalends, Williams and Wilkins Co.)

In the brave old days, when knighthood was a flower, the hero of song and story rode forth to conquer the strong and render aid to females—if they appealed to his eye. Stalwart and proud, in shining armor, his gleaming escutcheon acclaiming to the world his noble lineage, he presented a type which still excites our admiration—although we smile.

It may have been that next to his heart he wore a circlet of the hair of his "ladye faire". Gad-zooks! To earn her smile he would gladly beard a lion in his den. Or, like Saint George, attempt to slay the dragon and shout—whatever there was to shout upon his coat of arms. It was a great life! But what did it amount to? Personal glory as a knight of renown and then—the grave. Nothing more substantial than a fleeting and ephemeral reputation was left to posterity as evidence that he had ever lived. Of the thousands who did live, how many are remembered?

Have chivalry and knighthood survived?

They have! But the knight of today is far removed from the type which answered the maiden's prayer in days gone by. The modern knight is the prosiest of all prosy types. He risks his life daily—but not for feminine whims. Such unfeminine things as maggots, chinsches, body lice, flies and fleas are the organisms which attract him most.

Slime, filth and dall kinds, scum, and fetid excrecences are the foes at which our modern knight hurls his lance and brings back—health! From

his test tubes he can bring a far rosier and more permanent blush to a maiden's cheek than was ever brought to the face of a lady love by the gory lance of a knightly victory in the days of ancient romance.

The modern knight seeks not, as did Sir Launfal, the Holy Grail. He seeks that which is more precious—the truth. And in doing so he courageously steps upon the toes of that most awesome of dragons—tradition! And visits upon his devoted head the maledictions of theology. But the true scientist battles on! Indecent vituperation, scurrilities of all sorts, derision and ridicule attend his efforts. But out of the efforts of this modern knight there are evolved dreams and realities of transcendent beauty.

A Walter Reed, a James Carrol, an Alexis Carrel, a John J. Abel, a Simon Flexner, to mention but a few, such are the knights of today, of whom it can be just as truly said, as it was of Sir Bayard of old, knights "sans peur et sans reproche".

Current Events

The Executive Committee of the State-Wide Antidiphtheria Campaign Organization met at Newark, Saturday, May 19, and adopted a definite plan, prepared by the chairman, for conducting this health crusade in New Jersey. Officers and members of the State Medical Society have participated in preparation of these plans and they are herewith published, in detail, for the edification of our readers and in order that physicians may be thoroughly and accurately informed as to various steps in the campaign.

Procedure for Conducting County Campaigns New Jersey Committee for the Prevention of Diphtheria

County Campaign Director

(1) Call meeting of representatives of County Medical Society, Official Health Boards, County Superintendents of Schools, Boards of Education, County Officials, Tuberculosis Society, Parent-Teachers' Association, and all other groups organized on a county-wide scale who may be interested in the campaign. (Sample letter attached, Exhibit 1.)

(2) Have each group give a contribution of service. County Medical Society endorses and assists in securing services of physicians; Superintendents of schools writes letter to principals, or Boards of Education; Tuberculosis Society may contribute publicity, clerical work, nurses or organizer's service, office as headquarters. Other organizations may contribute speakers, funds for supplies, printing, etc. Public Service companies and industries may place stuffers in pay envelopes.

(3) Establish centrally located county headquarters in the office of Tuberculosis Association, Health Department, Red Cross, Chamber of Commerce, or County Superintendent of Schools, where supplies may be received and distributed.

(4) Arrange for securing well prepared publicity. A professional or volunteer organization member or worker usually does better work than the newspaper editor or reporter who

volunteers, although friendly contact with the newspaper is extremely important.

(5) Organize a Speakers' Bureau to make speakers available for meetings in all parts of the county.

(6) Secure Campaign Committees under capable leadership in each community. Experience has shown that the Health Officer is probably best suited for chairman. School Principal, Parent-Teachers' Association's President, School Medical Inspector, a prominent physician, or a service club member, are all good choices. See that each committee chairman has a copy of "Procedure".

(7) Set definite dates, preferably in October and November, for clinics. The most successful method is to set a definite campaign period for the entire county for 1 month, with clinics scheduled 5 days a week. The county can be restricted with convenient centers and every community included; children can be transported by bus and traction companies or motor corps organized by service clubs.

(8) Send copy of attached sample letter (Exhibit No. 2) to all Medical Society Members.

(9) Appoint Finance or Ways and Means Committee for the County.

(10) Small rural communities may need to be reached by an emergency unit although, if sufficient publicity is used and transportation facilities well worked out, these children may be brought to larger centers. In case that is not done, an emergency "clean-up" squad may be organized.

EXHIBIT NO. 1

LETTER TO BE SENT TO COMMITTEE MEMBERS

My dear

In 1927, there were 5782 children ill of diphtheria in New Jersey. This in spite of the fact that a tried and proved preventive treatment exists which confers immunity against this dreadful scourge of childhood.

You, who have the welfare of the community's children so much at heart, will, I am sure feel that County cannot permit its boys and girls to remain unprotected, when safety is readily at hand. You have doubtless heard that every county in New Jersey is being organized for a state-wide Diphtheria Control Campaign. Mr. Frank J. Osborne, State Chairman of the Diphtheria Control Committee, has recently written asking me to undertake the organization of County, and has asked me to form a committee representative of all interests and agencies for the conduct of the campaign. For this purpose I am calling together a group of the county's leading citizens to meet (time and place of meeting.)

Your membership in the committee and presence and assistance at the meeting will be of great value.

Sincerely yours,

EXHIBIT NO. 2

SAMPLE LETTER FOR MEDICAL SOCIETY MEMBERS

My dear

As a physician you are familiar with the value of preventive measures against diphtheria, and doubtless regret that all parents do not avail

themselves of this protection for infants at the age of 6 months as a routine practice. This ideal will probably eventually be attained through education of the public but in the meantime the majority of children are left unprotected during these years when the greatest case incidence and largest number of fatalities occur. A decided increase in morbidity was noted in 1927.

To combat this evil and reduce this unnecessary loss of life, a state-wide movement has been inaugurated in New Jersey, of which you have doubtless learned through the State Medical Society, which has given its endorsement and is actively participating in the organization of the campaign. The campaign objective is to disseminate to the public, through every known publicity channel, a knowledge of the value and importance of immunization at an early age by the family physician.

We are, however, confronted with the fact that a large number of school children whom it will be difficult to reach in private practice are unprotected. It is urged that physicians give the fullest possible cooperation in having these children cared for in public clinics. This method will serve the two-fold purpose of protecting children of school age, and proving the efficacy of this protection so that parents will be more readily convinced that their pre-school children should be immunized by the family physician.

The success of the movement is essentially in the hands of the county's physicians. While you cannot be expected to conduct an educational campaign, your patients will rely upon your guidance in the matter. In several communities in the state, physicians have successfully conducted clinics for infants and pre-school children in their offices, after regular office hours. This procedure has the advantage of freeing office hours from interruptions and making the immunization easier for the physician and patient, as children can be immunized much more readily and expeditiously in groups.

Relying on your hearty cooperation, I am

Very truly yours,

County Publicity Director

(1) Send news of all meetings, clinics and other campaign events to news papers with county circulation. See that local committee chairmen are supplied with material and assist them in preparing articles, if necessary.

(2) Secure publication of pattern articles furnished by State Committee. Articles of state-wide interest will be supplied to county papers from state headquarters.

(3) Obtain posters and films from State Headquarters.*

(4) Assist in organizing Speakers' Bureau and arranging meetings.

(5) Secure pamphlets for distribution from New Jersey Tuberculosis League, 21 Walnut Street, Newark, New Jersey.

(6) Arrange radio talks, if radio service is available.

*Because of its facilities of space and personnel, the New Jersey Tuberculosis League, has been selected as the assembling and distributing center for campaign material. For plans, pamphlets, posters, films or other supplies, address: New Jersey Tuberculosis League, Inc., 21 Walnut Street, Newark, N. J.

Community Campaign Director for Local Committee

(1) Call meeting of representatives of Board of Health, Board of Education, Chamber of Commerce, Town Council, Parent-Teachers' Association, Women's Clubs and all other community groups, official and volunteer. Explain purpose of campaign and ask for contribution of service.

(2) Appoint from above group, Finance or Ways and Means Committee, and a Publicity Committee or Director.

(3) Plan financing of campaign, dividing expenses among various groups. Boards of Health and Education usually divide the cost of medical service, nurse, printing, immunizing products, medical supplies. Contributions may be sought where necessary from unofficial organizations.

(4) Arrange for publicity with showing of motion pictures, radio distribution of pamphlets, etc. Speakers should appear before groups—Kiwanis, Rotary, Parent-Teachers' Associations, etc. A printed lecture is available for their use. Special community meetings are seldom desirable.

(5) Set dates for conducting clinics, if considered desirable, with County Committee, if county-wide schedule is to be arranged. Three immunizations are necessary, 1 each week. As new cases usually appear for treatment at the time of second clinic, 4 weeks should be allowed or a fifth if preliminary Schick test is to be used.

(6) Secure place for holding clinics. This will usually be in school buildings for school children; in physician's offices or Well Baby Stations, Red Cross rooms or hospitals for the pre-school child.

(7) Secure distribution of request slips and pamphlets, similar to attached sample. (Exhibit No. 3) through schools. They may be obtained from county committee or be printed locally.

(8) Secure the following assistants: Supply Officer; Publicity Agent; Nurses—School, or Board of Health nurse—hospitals; Doctors—Board of Health, or School Medical Inspector, or local volunteer physicians; Clerks—for records, teachers, high school girls, committee member. (One physician, nurse, clerk and lay assistant can immunize about 125 children per hour, or give 60 Schick and control tests per hour.)

(9) Give each person an instruction sheet pertaining to his duties.

(10) When you know how much immunizing material will be needed, order from manufacturers.

(11) When work is finished mail report to your County Chairman.

Supply Officer or Finance Committee

(1) Secure record forms from each class room from the State Department of Health or County Committee. These are furnished free.

(2) Have printed or mimeographed a sufficient number of the sample letter Exhibit No. 3, with the request slip required, to send 1 to the parent of each child.

(3) Order 3 c.c. toxin-antitoxin or other approved immunizing substance for each child to be immunized, plus 10% for wastage, from manufacturer. Keep material at temperature under 50° F., but do not allow to freeze. Material for treatments, including Schick tests where used, will cost from 20 to 25 cents for each child.

(4) Order Schick test material, if test is

used. Material comes in outfits comprising 2 containers; each outfit provides for from 10 to 50 tests. Allow 20% for wastage; it should be kept at temperature under 50° F. and should be discarded 4 hours after dilution. Material will cost 2½ cents per child.

(5) If the treatment is to be administered at the school, arrange with the school board for permission. Select a well lighted place where a table for syringes, needles, cotton, etc., can be placed. Have the place so situated that the children can pass by in line formation, arranged alphabetically by room.

(6) Arrange for use of tables, which should have surfaces protected.

(7) Arrange for use of some stove, either a gas-plate, a "canned heat" burner, or an electric sterilizer, in the room.

(8) For each unit of 100 children have ½ lb. absorbent cotton; 1 pint denatured alcohol or acetone; 4 Record type syringes; 2 dozen hypodermic needles with Record slip, ⅝ in. long, No. 25 gauge.

(9) Have two 1 c.c. Record type syringes, if Schick test is used, 1 dozen hypodermic needles with Record slip 27 gauge, 3/16 to 1/4 in. long for Schick and control injections.

(10) Have a small pan about 1 quart capacity to sterilize syringes.

(11) Small shallow trays to hold alcohol, cotton, etc.; Petri dishes are good.

(12) Pair of forceps for nurse.

(13) Pencil for clerk.

(14) Record names of all children whose parents have signed request slips.

EXHIBIT NO. 3

Dear Parent:

Is your child protected against diphtheria?

Each year in New Jersey about 5000 cases of diphtheria are reported and about 500 persons die from this disease. Most of them are children.

Nearly all this sickness and death is unnecessary, for diphtheria can be prevented. Three injections, a week apart, of small quantities of an immunizing agent make the body gradually produce its own protection. When this protection is once established, usually after 3 months, it lasts for many years and probably for life.

Nearly all young children need this treatment because they have not yet developed the protection which nature sometimes gives to older persons. Many older children and adults never develop natural protection. Those who are protected either by nature or by treatments can easily be identified by means of the Schick test. This test consists of placing a drop of harmless liquid in the skin, and waiting to see if a red spot appears in a few days. If no spot appears the person is protected.

The test and treatment are harmless no matter how young the child. At the point where the treatment is given the arm may become red or inflamed for 1 or 2 days, but practically never does this interfere with work or play.

Your child should be protected against diphtheria. Don't risk waiting. If you cannot obtain the treatment from your physician, sign the attached blank and have your child give it to the teacher. He can then receive the treatment and, if necessary, the test at school.

Very truly yours,

.....

REQUEST FOR DIPHTHERIA IMMUNIZATION AND THE SCHICK TEST

Board of Health

Board of Education City, Borough or Township.

I hereby request that my child age be given the 3 necessary immunizing treatments to protect against diphtheria and also be given the final immunity test

Date 192

..... Parent or Guardian.

Physicians

Toxin-antitoxin or other immunizing substance is given subcutaneously at weekly intervals in a series of 3 injections. The dosage is 1 c.c. for each injection, for all ages, except infants under one year, whose first injection should be 0.5 c.c. This mixture is injected preferably by using a Record type syringe with a 25 gauge needle ⅝ in. long.

The site selected is the upper arm near insertion of the deltoid muscle. The skin should be sterilized at the site of injection with tincture of iodine or 95% alcohol. Being of fine gauge, the needle should not be plunged into the skin with a jabbing motion, but inserted by means of a firm steady thrust well under the skin. It is best to encircle the arm with the hand, holding both the arm and the skin firmly while the needle is being inserted.

It is considered quite unnecessary and from certain standpoints undesirable to give the Schick test to very young children or even to older children before toxin-antitoxin is administered. Nearly all children under 5 years of age, and the vast majority of those between 5 and ten are susceptible to diphtheria. To give the test to such children merely delays and complicates matters as well as adds to the cost of immunization work. The safer method is to give treatment to all children first.

Nurses

Arrange material on table covered with a clean sheet.

Sterilize syringes and needles.

Saturate cotton with alcohol, place in Petri or other shallow dish.

Rub rubber cap of capsule over cotton to sterilize it.

Fill syringe with air.

Push needle through cap, expel air, fill with material.

Do not sterilize syringe each time, but sterilize needles, either by boiling or alcohol.

Put a clean needle on syringe with forceps.

Supervise clerk in checking off each individual with the list.

Sterilize site of inoculation with cotton wet with alcohol.

A simple and efficient method is to sterilize the needle by wiping it upon cotton saturated with alcohol in Petri dish. The small-necked 10 c.c. vials of material may be uncorked and the syringe rapidly refilled, the needle not being removed, instead of boiling the needles and changing them for each inoculation. Contamination is thus avoided.

Conduct of Clinics

(1) Messengers should be used to summon children promptly from school rooms in order

to avoid delay. Each class room should proceed to clinic room in orderly manner in charge of teacher, who brings record forms; each child carries signed request slip which is displayed to clerk.

(2) Locate clerk with record sheets near door by which children enter. The clerk should record date of immunization against child's name, as child passes desk.

(3) Children pass nurse or attendant who sterilizes spot on right arm at insertion of the Deltoid, with cotton dipped in iodine solution or alcohol, and child passes physician who gives injection.

(4) An assistant, preferably a nurse, should be assigned to fill syringes for each physician giving treatment. The attendant preparing arms may be a teacher, committee member or any other intelligent person, if enough nurses are not available.

Publicity Agent

(1) Arrange with the Editor of your paper to have the enclosed articles printed. (Exhibit No. 4.)

(2) If desirable, arrange a meeting of the Parent-Teacher Association or a general public meeting, and have a physician talk on the value of immunization.

(3) If possible secure posters and have them placed in conspicuous places.

(4) Have a meeting at which a movie-reel can be exhibited. The motion picture houses are usually glad to show such films during the campaign.

(5) Arrange with the County Committee for the reel.

EXHIBIT NO. 4

Article Number 1

.....will join the State-wide Campaign for the eradication of diphtheria in New Jersey, and the organization of a committee to undertake practical measures for the control of this dreaded scourge of childhood will be undertaken at once.

Dr., representing the State Diphtheria Control Committee in (county of community) has asked representatives of every official or volunteer health, welfare and community agency to meet on (time and place) for the purpose of formulating plans for an intensive campaign. "A tried and proved method of protecting against diphtheria is available," said Dr.

The objective of the campaign is to eventually secure, through the family physician, immunization of all children of ages between 6 and 9 months. The child responds readily to treatment at this time and is entering upon the period when it is most susceptible to diphtheria, and a time when fatalities most readily occur. It is estimated that there are about 350,000 children in New Jersey under 5 years of age. It is in this group that 1/3 of all cases of diphtheria and 1/3 of the deaths occur. If a considerable portion of these children can be immunized a great saving in life and health will result.

"We cannot, however, neglect the school population" Dr., continued, "as there are about 330,000 children in the state between the ages of 5 and 9. In this age group 2/5 of the diphtheria cases and 1/3 of the deaths occur. It is apparent, therefore, that until every child is immunized against diphtheria before it

reaches school age, it will be necessary to carry on this work among school children." Dr. added that most communities conduct clinics for the immunization of school children and that the committee would probably decide to undertake their organization inschools.

EXHIBIT NO. 4

Article Number 2

Every agency and organization in _____ will join in a united community effort to protect children against the ravages of diphtheria, it was determined at a meeting of representatives of official and volunteer groups in (time and place of meeting).

An intensive publicity campaign will be organized to inform the public of the safety and availability of a treatment which has been proved to be an almost certain preventive. Parents of children under school age will be urged to have immunization done by the family physician, while clinics will be organized in the schools under the auspices of the Boards of Health and Education for the immunization of school children. Pupils will be immunized only at the request of parents.

Dr., committee chairman, states that the administration of the treatment is a simple procedure. Three hypodermic injections of an immunizing substance are given in the arm of the child at intervals of one week. The process has been used successfully in New Jersey since 1914. It is estimated that 130,000 children have thus far been immunized in the state. The immunization of children on a large scale was begun by Doctors Park and Zingher of New York in 1913, and its use in many localities has since conclusively demonstrated the effectiveness and harmlessness of the measure.

The meeting was attended by (names and agencies represented).

EXHIBIT NO. 4

Article Number 3

Clinics for the inoculation of the school children of will be held (Give clinic schedule.)

....., Committee Chairman stated that the clinics are a part of an organized effort to control diphtheria in and are being conducted by the Boards of Health and Education. Request blanks with explanatory pamphlets have been sent to all parents of school children. Parents wishing their children to receive treatment will sign the blanks and return them to the school. Parents of infants and pre-school children are being urged to have the treatment given by the family physician.

..... states that no parent needs to hesitate to have a child protected on account of fear of any harmful after-effects. The process has been used since 1913, and hundreds of thousands of children have received the treatment with no ill effects other than a slightly sore arm, which practically never interferes with work or play. A general reaction of headache, loss of appetite and fever may occur among adults or older children. "The parent need not fear to have the child given the treatment, but

he should certainly fear the responsibility of leaving him unprotected," said Dr. He added that immunity is not established for about 3 months after treatment. It is necessary to stimulate the body cells to produce a supply of antitoxin, thus creating active immunity. This process takes place slowly, but when established lasts for years and probably for life. For this reason, the disease sometimes occurs in persons who have received the protective treatment but have not had time to develop immunity. Should this occur the immunizing injection does not interfere with treatment by antitoxin, which is an entirely different substance, used only in actual treatment of the disease, or for the conferring of brief immunity in a period of epidemic. The administration of antitoxin does not confer permanent immunity, and persons who have had diphtheria are not thereby immune from future attacks.

The Woman's Auxiliary

It has been the ambition of the officers of the Woman's Auxiliary to the Medical Society of New Jersey to attain a complete organization throughout the state prior to the Annual Convention at Atlantic City in June, and the Society's Executive Secretary has strenuously endeavored to aid them in effecting this objective. Perfect success has not proved possible but the desired goal is very nearly reached. With organization during May of auxiliaries to the Morris and Sussex County Medical Societies, as herewith reported, we have covered in 20 out of our 21 counties; and, that last county has scheduled a meeting in July to consider such organization. We cannot say positively whether any other state is 100% organized on this question but we are not aware of any state that has an auxiliary to every one of its county medical societies. It looks as if New Jersey may yet be the first to make such a record, and that we shall be delayed only a short time longer than the organizers had hoped would be expedient.

The June meeting of the State Society Auxiliary ought to give this movement a great impetus. With an opportunity to confer concerning local conditions and problems, and a chance to hear from visitors what is being done in other states, each group of county auxiliary officers will return home with new ideas and renewed energy to invigorate their organizations.

We are confident that this movement is going ultimately to be of great benefit to the medical societies but we must not overlook the fact that organizing is only the first and easiest step toward a useful and effective career. The trial is yet to come. One need not be surprised if it requires 2 or 3 years to bring about smooth functioning and profitable working conditions. It is educational work, and all work of that character progresses slowly. It is truly remarkable that we have gotten so far in little more than a year. Now, with the machinery set up, let us learn how to employ it in the most satisfactory manner to meet local and general needs.

Atlantic County

Reported by Mrs. Lawrence A. Wilson

The Woman's Auxiliary to the Atlantic County Medical Society met at the Chalfonte Hotel, Fri-

day, May 11, Mrs. Massey, the President, in the chair.

This was "reciprocity night" and the Presidents of all Atlantic City Clubs were invited.

Due to the fact that we had guests, business meeting was made as short as possible.

Mrs. Maurice Chesler was elected Delegate to the State Convention to be held in June.

After routine business, Mrs. E. C. Taneyhill spoke on "Life Prolongation", a subject of interest to us all. It was made interesting as only Mrs. Taneyhill can make a health talk.

Bridge was played for the rest of the evening, and prizes were given to those holding high scores.

Bergen County

Reported by Mrs. F. C. McCormack

The Woman's Auxiliary to the Bergen County Medical Society met at the Nurse's Home of the Hackensack Hospital, April 10, with 14 members present.

At the close of the business session, Dr. F. C. McCormack, President of the Bergen County Medical Society, addressed the meeting with reference to the opportunities for work on the part of the auxiliaries and pointed out that the Bergen County Medical Society was ready to cooperate with its Auxiliary in any helpful way.

A luncheon and meeting for election of officers for the coming year was planned to be held on May 8, at the Oritani Club, Hackensack, N. J.

At the close of the meeting, tea was served and a short social time was enjoyed.

Reported by Mrs. Valentine Ruch

On Tuesday, May 8, 1928, the Woman's Auxiliary of the Bergen County Medical Society celebrated its first birthday by a luncheon held at the Oritani Field Club, Hackensack.

The table decorations were yellow, white and green giving the occasion a charming spring-like note.

The guests of the day were: Dr. Henry O. Reik and the officers of the county society.

After the luncheon, a regular meeting was held at which the reports of the officers were read. The Nominating Committee presented the names of the same officers for reelection. There being no opposing candidates, the president instructed the secretary to cast the ballot.

Camden County

Reported by Mrs. Thomas P. McConaghy

A regular meeting of the Woman's Auxiliary of the Camden County Medical Society was held on Tuesday afternoon, May 8, at the home of our State President, Mrs. A. Haines Lippincott, 303 Cooper Street, Camden, N. J., with the President, Mrs. A. J. Casselman presiding.

A short business meeting was held.

There was a talk about the work the Auxiliary might perform, which included the subject of the extension of "Hygeia". An effort will be made by Mrs. Harold F. Wescott to have Hygeia placed in each High School, Junior High School and Library in the county.

Mrs. A. Haines Lippincott read and gave a short talk on the program of the Annual Convention to be held in Atlantic City in June and urged a large attendance. Mrs. A. J. Casselman, Mrs. E. G. Hummel and Mrs. Orris W. Saunders were elected as delegates, with Mrs. Edward C.

Pechin, Mrs. Harold F. Wescott and Mrs. Levi E. Hirst as alternates, to attend the convention.

After the business meeting was disposed of, Dr. A. L. Stone, Public Health Officer of the City of Camden, gave a very interesting address on "Public Health", which he divided into such parts as communicable diseases, prevention of diseases, child welfare, venereal diseases, the city laboratory, etc. Those present not only enjoyed the talk, but appreciated and were greatly enlightened by the inside knowledge of public health work in our own city.

The meeting adjourned, after which tea was served; Mrs. A. J. Casselman and Mrs. Edward C. Pechin pouring.

Essex County

Reported by Mrs. George A. Rogers

The Woman's Auxiliary of the Essex County Medical Society held a regular meeting on Monday, April 23, at the Academy of Medicine. The speaker for the afternoon was Dr. Ruth Hillyer, Superintendent of the Parental Home in Newark. She spoke of the need for more city play grounds with trained supervisors, and showed where the educational system is at fault in mingling sub-normal with normal students, giving of necessity the former an undue amount of attention.

Her personal work among the boys in helping to adjust the apparently incorrigible ones to a better mode of living made a very strong appeal to her audience. For this there is no public fund, and she has to draw on her own resources or on those of willing friends. Therefore, with the sanction of an officer of the State Board, the auxiliary has planned a card party for May 21, part of the proceeds to be turned over to Dr. Hillyer, and part toward our work in placing Hygeia in the many places where it can be of use.

The weather, as seems to be usual for the day of meeting, was very inclement, and the attendance was small, but the lack of numbers was made up for by the interest and enthusiasm of those present.

Gloucester County

Reported by Mrs. William Brewer

The annual meeting of the Woman's Auxiliary to the Gloucester County Medical Society was held at Pitman Golf Club, April 19, 1928. After the routine business the following officers were elected:

President, Mrs. James Hunter, Jr.; First Vice-President, Mrs. Luther Halsey; Second Vice-President, Mrs. Chester J. Ulmer; Secretary, Mrs. Harry L. Sickel; Treasurer, Mrs. David R. Brewer; Delegates to the State Society: Mrs. Samuel T. Ashcraft—Alternate, Mrs. Frank Fisher; Delegate, Mrs. Ralph H. Hollinshed—Alternate, Mrs. J. Harris Underwood.

Mrs. E. E. Downs gave a very interesting report on meeting of the Executive Committee of the Woman's Auxiliary of the Medical Society of New Jersey held at the Cartaret Club in Trenton, Monday, January 3, 1928. Mrs. James Hunter, Mrs. E. E. Downs and Mrs. H. L. Sickel attended that meeting. Mrs. Hunter suggested, as an educational feature, for everyone who could to tune in on WPG, Atlantic City, every Friday evening to listen to health talks.

Mrs. J. H. Underwood, Chairman of Public Health Hygiene, reported 2 talks in February and 2 in March before different organizations by Mrs. Taneyhill, and that she has an appointment for Mrs. Taneyhill at Glassboro Normal School at 1 p. m. on May 3.

Meeting adjourned, after which both the Gloucester County Medical Society and its Woman's Auxiliary were entertained at dinner by Dr. and Mrs. Samuel F. Ashcraft.

Hudson County

Reported by Mrs. H. J. Perlberg

The Woman's Auxiliary of the Hudson County Medical Society held its regular meeting on April 20 at the Y. W. C. A. in Jersey City, Mrs. Wm. Freile presiding. Routine business was conducted.

A letter from the State President was read stating that extensive plans are being made for entertainment of visiting members at the Convention in June.

A committee, comprising Mrs. A. Largay, of Bayonne; Mrs. A. C. Ruoff, of Union City; and Mrs. H. J. Perlberg, of Jersey City, was formed to present nominations for officers at the annual meeting to be held in May.

Arrangements have been made for an outing of the members and their guests to be held at the Arcola Country Club on May 22, at which time there will be a golf tournament for the golfers and a bridge tournament for the bridgers. Prizes will be awarded for both events.

After the business session, the usual entertainment of cards and tea followed.

Morris County

In response to an invitation, issued by the President and Secretary of the Morris County Medical Society, the wives of the members of that society met in the Parish House of the Church of the Redeemer at Morristown, Tuesday, May 15, at 3 p. m., for the purpose of organizing a woman's auxiliary. Dr. Reik, Executive Secretary of the State Medical Society, addressed the meeting, explaining the origin of this movement and the progress so far made in forming auxiliaries to the county medical societies of New Jersey. Dr. Reik also presented for consideration a model constitution and by-laws, such as had formed the organizations inaugurated in other counties, and explained the meaning of its several clauses.

Following this presentation, and in view of the fact that the county medical society had endorsed the proposition and invited the ladies to effect an organization, those present voted unanimously to adopt the offered constitution and by-laws and to take the necessary steps toward formal organization. In view of the relatively small attendance, it was deemed wise to elect temporary officers and to call another meeting, with the hope of securing a larger attendance, for the election of permanent officers and the choosing of delegates to attend the State Society meeting in June. Mrs. Bernard McMahon was chosen for temporary president, and Mrs. R. L. Gilbertson for secretary. A resolution was adopted declaring that wives of all the members of Morris County Medical Society should be considered charter members of the woman's auxiliary and should be so notified when invited to attend the next meeting.

It was decided to hold the next meeting at the same place and the same hour on the afternoon of Thursday, May 24, and the ladies present volunteered to communicate by telephone with the wives of members not in attendance at this meeting, urging them to come to the next one.

Passaic County

Reported by Mrs. William A. Dwyer

On Thursday, March 9, the Woman's Auxiliary

to the Passaic County Medical Society held a very interesting meeting at the Health Center, in Paterson. The new members present were: Mrs. J. V. Bergin, Mrs. J. C. McCoy, Mrs. Richard Stinson, Mrs. Wm. Spickers, Mrs. John Ritter, Mrs. Oram and Mrs. Pelusio.

Mrs Tuers gave a report of the visit made to "The Valley View Sanatorium". This is a county undertaking for the treatment and care of tuberculosis. The building and equipment will make one of the finest institutions in the state.

Mrs. Jeffries, Principal of the Lincoln School, in Hawthorne, gave an interesting talk on what is being done to protect and improve the health of school children.

Another very interesting talk was given by Mrs. Wickes, of the Board of Health, on "Social Problems in Our City".

Dr. Conaway and Dr. Morrison, President and Secretary of the New Jersey Medical Society, said a few words of encouragement to the auxiliary. Both stressed the need of furthering the Anti-diphtheria Campaign and congratulated us upon our attendance and rapid growth.

The meeting was adjourned, and the members were invited to join the men in hearing a medical lecture.

Sussex County

The Sussex County Medical Society having, at its meeting of December, 1927, accepted the request of the State Medical Society and authorized organization of a woman's auxiliary to the county society, the members of the county society were invited to bring their wives to the May meeting for the purpose above mentioned. Dr. Reik, Editor of the State Society Journal, attended the meeting at the Cochran House, Newton, Wednesday, May 16, to explain the development of similar auxiliaries in other parts of the state. Various things happened to interfere with a representative attendance of members' wives at this meeting and in view of the small attendance, it was deemed unwise to proceed to a formal organization. The county society, however, voted unanimously to hold a special meeting, which should be in the nature of a dinner, at Pen-y-Byrn Inn near Sparta, Friday, May 25, at 7 p. m.; each member present promising to bring his wife to that dinner and to urge the same action upon the part of other members of the county society who were unavoidably absent from today's meeting. The secretary of the county society requested, and Dr. Reik promised to make arrangements for having Mrs. Taneyhill attend the dinner and address the combined meeting of physicians and their wives upon the educational work of the State Medical Society and the part that women's auxiliaries can play in developing this program; her address to be followed by a formal organization of a Woman's Auxiliary to the Sussex County Medical Society.

Union County

Reported by Mrs. H. V. Hubbard

The regular quarterly meeting of the Woman's Auxiliary of the Union County Medical Society was held in the Nurse's Home of Muhlenberg Hospital, Plainfield, in April. The First Vice-President, Mrs. P. du Bois Bunting, of Elizabeth, presided; the President being absent because of illness. Mrs. P. B. Cregar acted as Secretary.

Mrs. H. V. Hubbard, of Plainfield, and Mrs. R. A. Shirrefs, of Elizabeth, were elected delegates to the Convention in Atlantic City on June 7.

The alternates are Mrs. C. H. Schlieter and Mrs. Arthur Casilli.

Voted to have a card party on May 17 at the home of Mrs. C. H. Schlieter, in Elizabeth. A committee of ladies from Elizabeth is to take charge of it.

A suggestion was made that a number of local speakers be looked up and invited to speak at our meetings and make them more interesting.

After the business session dainty refreshments were served by the assistants of Miss Louis, Superintendent of the hospital

Executive Meeting May 11

An Executive Committee meeting of the Union County Auxiliary was held in the home of the President, Mrs. F. A. Kinch, on Friday, May 11.

Definite arrangements were made for the card party and for the program and refreshments at our next meeting in July.

A committee was appointed to send a letter to all the women in the county eligible for membership. The letter is to contain definite information of the need of an auxiliary; work waiting for it to do, and which it might do, to further the work of the medical profession in the county and other items tending to create an interest and increase the membership of our auxiliary.

The committee consists of Mrs. H. V. Hubbard, Mrs. F. A. Kinch and Mrs. P. B. Cregar

Members of the Woman's Auxiliary to the Union County Medical Society enjoyed the hospitality of Mrs. C. H. Schlieter, in her home on North Broad Street, Elizabeth, for their May meeting.

Mrs. F. A. Kinch, of Westfield, the President, greeted the ladies and welcomed them in a few well chosen words. She then introduced Mrs. George L. Orton, of Rahway, the President-elect of the State Auxiliary.

After several games of bridge had been played, Mrs. R. A. Shirrefs announced those winning the prizes, as dainty refreshments were being served. They were: Mrs. H. V. Hubbard, of Plainfield, a scarf; Mrs. George T. Banker, of Elizabeth, silk stockings; Mrs. Sherwin L. Hazeltine, Elizabeth, bridge set; Mrs. Thomas J. Walsh, of Elizabeth, set of cards; Mrs. A. R. Hoover, of Elizabeth, set of cards; Mrs. Jones and Mrs. A. M. Cassilli, of Elizabeth, packs of cards.

The committee in charge who assisted the hostess in receiving were: Mrs. R. A. Shirrefs, Mrs. D. R. McElhinney, Mrs. A. R. Cassilli, Mrs. M. A. Shangle, Mrs. S. F. Wade, and Mrs. P. du Bois Bunting, all of Elizabeth.

The next meeting of the Auxiliary will be held in July in a country club, at which time the reports of the State and National Auxiliary meetings will be heard. The delegates elected to attend those meetings are Mrs. F. A. Kinch, President; Mrs. H. V. Hubbard, and Mrs. R. A. Shirrefs.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M.D., Reporter

The regular monthly meeting of the Atlantic County Medical Society was called to order by the President, W. C. Wescott, on Friday evening, May 11, 1928, at 8 p. m., at the Chalfonte Hotel.

The minutes of the previous meeting were read and approved.

Secretary Joseph H. Marcus read a letter from the Secretary of the American Medical Association directing our attention to a sanatorium on the boardwalk with a Dr. Liebman as director, which is apparently a commercial proposition, and asked for more information as to the ethics of the proposition. The Secretary stated that the Chamber of Commerce is now investigating the matter. Motion was made that this be referred to the Committee on Public Health and Legislation, which is to report to the Secretary of the American Medical Association.

A letter was read from Dr. W. M. L. Coplin enclosing a check for any dues he may owe so that he may be in good standing in the American Medical Association. In a letter the Secretary of the State Society suggests that Dr. Coplin be nominated as an honorary member in the New Jersey State Medical Society, which would obviate the necessity of paying dues. This was the original idea in making him an honorary member in this county society.

A letter was read from the Secretary of the State Society, stating that we were lacking 2 Permanent Delegates. Dr. Conaway nominated Drs. Clarence Andrews and C. B. Kaighn to fill the vacancies. They were elected.

The Secretary read an application for membership from Dr. C. E. Weinberg, which was referred to the Board of Censors.

Dr. W. Blair Stewart, reporting for the Public Health and Legislation Committee, stated that investigations are being carried out regarding the work of several unethical practitioners, which will shortly be brought to light.

It was moved and seconded that resolutions be passed and telegrams of these resolutions be sent to Senator Edge and Congressman Bacharach condemning the proposed increase in the narcotic tax on physicians to \$3 and also the ruling that medical men be denied the privilege of charging off on their income tax return expenses coincident to attending medical conventions. Drs. Stewart and Conaway were appointed a committee to draft these resolutions.

It was decided to postpone the annual outing of this society until September.

Dr. Clifford B. Lull, Associate in Clinical Obstetrics, Jefferson College, showed 4 reels of very interesting moving pictures illustrating various normal and abnormal obstetric procedures. These pictures were all taken at the Philadelphia Lying-In Hospital under the supervision of Dr. Norris Vaux. Normal cases were delivered under obstetric analgesia given by an expert anesthetist and using ether, preferably. The series of normal deliveries shown on the screen illustrated various steps of the second stage of labor. The delivery by forceps was illustrated by 3 cases of mid and low forceps application. Episiotomy is done routinely on forceps deliveries. The lacerations are repaired while waiting for the placenta to separate, and the operative field is kept free of blood by the use of vaginal pack.

Several cases were shown in which internal podalic version was done according to the technic of Potter. The indications for version in these cases were: persistent posterior rotation of the occiput, face presentation, and nonengagement of the head in a normal sized pelvis. All after-coming heads were delivered by aid of the Piper forceps.

Cesarean section done under general anesthe-

sia and local anesthesia was shown in the last reel of film, together with one case of abdominal hysterotomy done at 3 months of the pregnancy because of persistent toxemia and the desirability of sterilization; this was done under local anesthesia.

The method of closing the uterus in 4 layers without tying any knots in the wound was demonstrated by a close-up picture of this part of the operation.

Showing in the space of 1 hr. and 15 min. of 1600 ft. of film of the most common obstetric operations enables one to open up the entire field of obstetrics for discussion at a medical meeting.

The speaker was not prepared to state how much these films would be used in undergraduate teaching, but for postgraduate work it unquestionably is an ideal way to demonstrate various points in the technic of conducting both normal and abnormal obstetric deliveries.

BERGEN COUNTY

Spencer T. Snedecor, M.D., Reporter

A crowded meeting was held in the Englewood Hospital the evening of May 8, and standees lined the rear wall. The business session was quickly disposed of by Dr. F. C. McCormack. Dr. A. B. Spiegelglass was elected as the additional annual delegate to the State Society.

A rather sharp discussion of Bergen County politics was started and ended without getting anywhere.

At the suggestion of Dr. C. A. King, of the Welfare Committee, the Society sent telegrams to our senators and representative opposing an increase in the narcotic license tax.

The speakers of the evening were 2 of our well-known friends from New York.

Dr. Orrin Sage Wightman, Attending Physician at City Hospital, former President of the New York State Medical Society, and nationally known for his work in photography, presented moving pictures illustrating "Syphilis of the Circulatory System".

The pathology of arterial syphilis was illustrated by delicate photomicrographs of the progressive stages. The initial lesion as the spirochetes break through the walls of the blood-vessels is a leukocytic infiltration to combat the invaders. As this goes along the vessel linings become thickened with the fibrous tissue of chronic inflammation and the lumen becomes plugged with débris. When the blood supply to the part is finally shut off, necrosis sets in and we recognize this as the gumma or last stage. Several specimens of syphilitic hearts and aortas were shown.

A striking case of aorta aneurysm protruding some 3 in. through the sternum illustrated the extreme type. Dr. Wightman went into the symptomatology in detail. This case came to autopsy and the huge dilatation of the aorta made a splendid specimen.

The message Dr. Wightman left with us was two-fold. First, the lesions of syphilis are hidden in the innermost recesses of the organs; secondly, complete cure of the disease is problematic. Treatments of syphilitics should be kept up year after year and only then can we feel certain of arresting the course of the disease.

Dr. Edward Livingston Hunt, Professor of Neurology at Columbia and Attending Neurolo-

gist to the City Hospital, presented 2 films of neurologic subjects from his service at City Hospital, illustrating the gaits, gestures and lack of coordinated movements of different diseases. Dr. Wightman filmed these pictures.

Locomotor ataxia in all its phases was the principal topic of Dr. Hunt. The early stage is characterized by pain and lasts from 1 to 3 years. The second stage is ataxia and this runs from 10 to 15 years. The patient surviving intercurrent diseases runs into the final paralytic stage and soon succumbs. The important diagnostic signs of tabes are the pupils (irregular, unequal, immobile), absent knee jerks, Romberg's sign and the ataxic gait.

Photomicrographs showed the site of the lesions to be in the anterior horn cells of the cord.

The differential gaits of all types of rare neurologic diseases were represented by patients performing before the camera. These pictures left unforgettable mental images.

In the treatment of tabes, salvarsan will help the pain and restrict progress of the disease. Frankel's exercises are valuable in teaching the unfortunates to walk. Malaria treatment is of little avail.

The discussion was opened by Dr. Frank Overton, Editor of the New York State Journal of Medicine. He spoke on the use of moving pictures for teaching purposes and emphasized the importance of the speaker with the pictures; otherwise, the pictures are quite worthless.

CAMDEN COUNTY

R. E. Schall, M. D., Reporter

The regular monthly meeting of the Camden County Medical Society was dispensed with for May and a good percentage of the doctors assembled at the Tavistock Country Club for an outing. The early part of the day was very wet but the weather man was kind and the rain ceased about 11 a. m.

A number of the doctors played golf during the afternoon. We all enjoyed a very good dinner after the afternoon's exercise. We were entertained with moving pictures, after which, cards were indulged in by a number of the doctors.

ESSEX COUNTY

Section on Obstetrics and Gynecology, Academy of Medicine of Northern New Jersey

John J. Connolly, M.D., Reporter

On Tuesday evening, April 17, 1928, there was held at the Academy of Medicine of Northern New Jersey, in Newark, a meeting of the Section on Obstetrics and Gynecology. The speaker of the evening was Frederick C. Holden, M.D., F. A. C. S., of New York City, Professor of Gynecology, University and Bellevue Hospital Medical College, and Attending Gynecologist at Bellevue Hospital and Nursery and Child's Hospital. His subject, illustrated by lantern slides, was "Acute Pelvic Infection. A Clinical Study from the Gynecologic Service of Bellevue Hospital".

It was suggested that these Section meetings be held on the third instead of the fourth Tuesdays, as has been the custom, so as not to conflict with meetings of the Section of Obstetrics and Gynecology of the New York Academy of Medicine.

Officers for the season of 1928-1929 were un-

animously elected, as follows: Chairman, Dr. Carl H. Ill; Secretary, Dr. Harvey T. Herold.

Dr. Holden's paper on the treatment of acute pelvic is best summarized in outline form, as follows:

Acute Salpingitis

Conservative measures in the handling of these cases have proved the best method in a series of 14,062 cases at Bellevue Hospital. Treatment outlined as:

Hospital. (a) Rest in bed for 10 days after temperature is normal. (b) Bowel hygiene—neither diarrhea by cathartics nor constipation allowed. (c) Ice bag to abdomen. (d) No unnecessary vaginal examinations. (e) Sedation.

Post-Hospital. (a) Bed at menses. (b) No auto rides. (c) No sex life. (d) Bowel hygiene to be kept up.

Comments. (a) Do no visceral extirpation if an abdomen is opened and acute tubal infection is found; rather close and treat conservatively as outlined above. (b) Acute salpingitis with recurrence and failure of conservative measures usually will respond to replacing of the pelvic viscera in their normal positions; no extirpation is needed. (c) Never operate until after 3 weeks of normal temperature and normal blood count.

Post-Abortal Sepsis

Handled by: (a) Small repeated transfusions. (b) Fluids by mouth, rectum and veins. (c) High caloric light diet. (d) Relieve all pain with sedatives. (e) Clear up all other foci of infection. (f) Sunlight or ultraviolet and fresh air. (g) Stimulate involution of uterus by having patient turn on abdomen, 15 minutes every 2 hours. (h) May try diathermy and milk protein treatment. (i) Intensive or special nursing care of the vomiting, diarrhea and distention. (j) The same conservative treatment as outlined under acute tubal infections.

Comments

(1) Cases handled in this way have had normal pregnancies subsequently.

(2) Where there is no pelvic pathology demonstrable, it is most likely a thrombophlebitis of the pelvic veins and is best handled as outlined above.

(3) Where the pelvis is "frozen" with pathology the same treatment applies except that, when indicated, local areas of pus are drained by cul-de-sac drainage or above Poupert's ligament.

(4) Don't make unnecessary vaginal examinations and don't allow diarrhea or constipation to exist.

The discussion was opened by Dr. Edward J. Ill and continued by Drs. John F. Hagerty, A. W. Bingham, Charles L. Ill, Samuel A. Cogrove, Richard J. Brown, Lewis Herndon, William Cox and others.

GLOUCESTER COUNTY

James Hunter, M.D., reporting for Dr. Diverty

A regular meeting of the Gloucester County Medical Society was held at the Woodbury Country Club, Thursday, May 17, at 9 p. m., the evening period being devoted to case reports and two very interesting papers.

Dr. J. Harris Underwood read 2 interesting reports upon acute lead poisoning and the value of the histories in such cases to the differential diagnosis; it was the history in each case, rather than the clinical symptoms, that

gave the clue to final diagnosis. The report proved both interesting and instructive. At the request of Dr. Burkett, Dr. Underwood detailed the treatment of a recent case of marginal placenta previa, sent in to the hospital by Dr. Burkett, and which terminated most happily in a living child and a pair of delighted parents.

Dr. Knight, District Health Officer, then read a paper upon "What Is the Value of the Health Officer". Detailing in an admirable summing up some of the more recent advances in sanitary science as applied by the Public Health Bureau to the everyday life of the average American family. (Paper to appear in the Journal later.)

The discussion following, this paper covered the various phases of toxin-antitoxin prophylaxis, serum sickness, the Dick treatment and prophylaxis for scarlet fever. The subject of tetanus antitoxin as a source of sensitization to horse serum was also most ably discussed, following a question by Dr. Hollinshed.

Dr. B. A. Livengood, of Sweedsboro, then followed with a report of "Two Interesting Cases of Aphasia", its symptomatology, differential diagnosis, prognosis and treatment. This paper was also interesting and brought forth some intelligent questions from some of those present. (To appear later in Journal.)

The President pro-tem, Dr. Duncan Campbell, then called upon the delegates who were present from Cumberland County, Drs. Knowles and Miller, of Millville, who briefly addressed the society, extending greetings and a cordial invitation to visit the old Cumberland County Society at its next meeting.

This being the last meeting until the coming Fall, the society adjourned to meet at the call of the Secretary.

We are expecting our esteemed reporter, Dr. Diverty, back from his World Tour in time to report the meetings for the balance of the year.

MERCER COUNTY

A. Dunbar Hutchinson, M.D., Reporter

The Mercer County Medical Society held its regular monthly meeting May 9, 1928. The minutes of the preceding meeting were read and approved. In the absence of any particular program, a general discussion of matters pertaining to the welfare of the society took place.

Dr. Louis A. Stein was duly elected an Active Member, and Dr. Anthony J. Lettiere, an Associate.

The President appointed Drs. McGuire, Scammell and Sommer as a committee to revise the By-Laws relative to "Contract Practice with Reference to the Compensation Act".

Dr. Lawrence H. Rogers spoke on the subject of "Increased Taxation under the Harrison Narcotic Law", and emphasized the necessity of immediate vigorous protest on the part of physicians, dentists and veterinarians. The Secretary was authorized to at once telegraph the society's opposition to the proposed increase in taxation to the Hon. Walter E. Edge, Hon. Edward I. Edwards, and Hon. Charles A. Eaton, at Washington, D. C.

Dr. Samuel Sica read a paper on the subject of "Physicians' Fees as Liens in Personal Injury Cases". Legislation was enacted in Nebraska in 1927, providing that physicians, nurses and hospitals rendering professional services in cases of injury shall have a lien on damages awarded.

The act, of course, is explicit with reference to the Compensation Law, and to the value of the services rendered.

Following discussion of this subject the Secretary was authorized to send a copy of the article to the Welfare Committee.

Dr. Schauffler spoke in reference to the interesting meetings that are annually held in Princeton, and the society moved to meet in Princeton, June 21.

Certificates of election for the "Annual Delegates" were duly signed and distributed.

MIDDLESEX COUNTY

Medical Section of Rutgers Club

J. H. Rowland, M.D., Secretary

The regular monthly meeting of the Medical Section of the Rutgers Club was held on Friday evening, May 11, at the home of Dr. Howley, 15 North Sixth Avenue, Highland Park, N. J. There were present 40 friends, guests and members.

The meeting was called to order promptly at 9 p. m. by the Chairman, Dr. Scott. There being no business to transact, the speaker of the evening, Dr. Nyiri, Private-Docent in Internal Medicine of the University of Vienna, and of the faculty of the College of Pharmacy of Rutgers University, at Newark, N. J., was introduced and spoke on "Some Recent Studies in Diagnostic Functional Tests". He stressed particularly the functional tests of the kidney and the liver, giving special emphasis to the calactose test for function of the liver, and the sodium thiosulphate test for kidney function.

After the scientific program, the gathering enjoyed refreshments furnished by the host. The meeting adjourned spontaneously.

MORRIS COUNTY

Marcus A. Curry, Reporter

A special meeting of the Morris County Medical Society was held the evening of Tuesday, May 8, at the Parish House, Church of the Redeemer, in Morristown. President Haven had the gratification of presiding over a goodly attendance of 44 members and guests.

Preliminary to presenting the special attraction, 2 announcements were made.

President Haven reminded that the regular meeting to be held on June 12 is to be devoted to Clinical Case Reports; that this will be more or less of an experiment and if it goes well it will be repeated; that the Executive Committee would like members who have cases worked up to notify the committee within a week, as they should like to get out the program; that if a sufficient number are not heard from, cases will be assigned to members but the committee prefers to have volunteers.

Dr. Larson, Chairman of the Library Committee, reported that according to instructions there are now on file in the Morristown Library all numbers of current volumes of about 30 Medical Journals, covering medicine, surgery and the specialties, which have been purchased or subscribed for through the library; besides this, Dr. McMahon, of the committee, has obtained and placed on file in the library more than a dozen State Medical Journals.

Dr. Larson emphasized that up to date these various journals have been used but very little and the committee trusts that in the future they will be used freely both by members of the County Medical Society and by such members of the laity as may be interested; that also in the location where the journals are filed have been placed facilities for registering, and asking those who use the journals to enter their names and the dates, thus providing some idea of how extensively these journals are being used so that the society can decide after a year whether this section for journals is to continue and whether it should be increased or decreased in scope.

President Haven introduced Dr. Lewis A. Conner, Professor of Medicine at Cornell and Attending Physician at the New York Hospital, who gave a most able and instructive talk on the subject of "Angina Pectoris and Coronary Thrombosis".

Dr. Conner prefaced his address by stating that there are several reasons for choosing that title. In the first place, it is a common disease and the sort of disease every practitioner is running up against; therefore, it is of a good deal of practical interest. In the second place, it is a condition or syndrome which has been gradually getting to be very confused, chiefly because of the increasingly wide application of the term to all kinds of heart pain; that he thought until quite recently, at least, there has been a great deal of uncertainty as to its significance and particularly as to the pathologic basis of these different varieties of heart pain; that in the past few years a great deal has been done to clarify the situation and to help us restrict the term to its more proper use, and especially to give us an increasing understanding of the underlying conditions which bring about this very prominent syndrome; that his talk was intended entirely for the general practitioner; that he was not offering anything new or original and offering nothing to those who were dealing with diseases of the heart that they are not already familiar with.

The term "angina pectoris" has gradually come to be applied to every variety of pain supposed to originate in the heart; so we have had false angina pectoris, true angina pectoris and vasomotor angina pectoris. He thought a great many of us have wondered if it wouldn't be better to drop the term "angina pectoris", because it came to have such an indefinite or obscure meaning; yet if we turn back to Heberton's original description, written in 1768, we find that he had a very clear, definite and sharply restricted syndrome in mind, and with our knowledge of today we can hardly improve upon the clinical description he gave; although we have a better understanding of what the internal changes are. Heberton emphasized that at the beginning of the trouble these people are apparently in good health, especially that they have no shortness of breath or other evidence of heart trouble; and then he goes on to that classical description of the attack itself: afflicted are seized in walking, especially uphill and soon after eating, with a painful sensation in the breast which seemed it would extinguish life were it to increase or continue, and the moment they stand still all this uneasiness vanishes; that is of course the classic description of what we now speak of as true angina pectoris the real syndrome. For some reason, walking is the type of exercise more than any other that is apt to bring on the pain; walking after eating or

walking up hill; and then there are the attacks which have no relation to effort, which are more protracted and more often end in sudden death.

Now, until very recently the 2 types have been grouped under the same term of "angina pectoris" that is, the angina effort and the other angina which has no relation to effort and which is much more protracted and more intense and so often attended by sudden death and which we now know as "coronary thrombosis". Within the past few years a differentiation has become more and more clear and it is a satisfaction to know that development of the clinical picture of coronary thrombosis is almost wholly due to American physicians; that until the past few years the English and French physicians were far less clear in their understanding of the situation and contributions of American physicians have brought it out more clearly and made it what it now is—a familiar and clearly recognized disease.

Dr. Conner emphasized the necessity of realizing that the second group, coronary thrombosis, means something different from the first group, angina pectoris, and is much more serious; and to refrain from applying "angina pectoris" to the odds and ends of pain; then you will have a much clearer understanding of the disease and what the pathologic basis is. In the treatment of thrombosis, Dr. Conner stressed that nothing takes the place of morphin and so far as he knew there is nothing that touches the attack but morphin.

Dr. Conner covered his subject with great pains and detail and freely answered the questions brought up in the discussion, which was taken part in by Drs. Rubin, Larson, McMurtrie, Emory, Rice, Krauss, Curry, Christian.

After the scientific section, the evening was rounded out by a buffet luncheon.

PASSAIC COUNTY

John H. Carlisle, M. D., Secretary

A regular meeting of the Passaic County Medical Society was held on May 10, at the Paterson Health Center. President G. E. Tuers was in the chair. Dr. J. H. Oran was appointed Secretary pro-tem. The members of the Woman's Auxiliary met with the society.

Dr. H. S. Willard read a paper on the "Early Management of Convergent Strabismus". He stressed the necessity of early treatment, as the brain center for vision will not develop after early life. The paper was discussed by Drs. Henion and Marsh.

Dr. B. F. Royer, Medical Director of the American Society for the Prevention of Blindness, read a paper on "Sight Saving". He outlined the national scope of the society's work.

Among the visitors were Mr. Wilson, of the Paterson Public Schools; Mr. Toms, of the Hawthorne Schools, and Principal Ritz, of No. 2 School, for the Blind of Paterson. These school superintendents each told what was being done in our neighborhood to prevent blindness and aid those already afflicted.

Dr. Yates, Chairman of the Radio Committee, reported difficulty in broadcasting over WODA. It was moved that the committee continue to act until the September meeting.

Drs. W. Flintcroft, L. Surnamer and W. L. Dunning were appointed a committee to draw up resolutions on the death of Dr. F. T. J. Was.

After a discussion of the lighting system in our meeting room the society adjourned.

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MODERN MEDICINE AND PUBLIC EDUCATION

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From the dawn of the history of mankind as reflected in the earliest records of antiquity, the practice of medicine and the physician as its exponent have always held an especial place of peculiar dignity in the minds and hearts of men. This dignity attaching to the physician is easily understandable from a realization of the elemental instinct upon which it is based—an instinct common to modern as well as primitive man—for the basis of medicine is the instinct of self-preservation.

Living beings have always feared death. In primitive times when diseases, if not actually deified, were frequently regarded as manifestations of the vengeance of wrathful gods, the awesome association of medicine and religion was as natural as it was unavoidable. In order to fend off death and to prolong life, illness must be avoided and death arrested; great, therefore, in the minds of men was he in whose hands lay such potentialities and in proportion as men were ignorant of the efficacy and use of remedies for disease there was the greater admiration of those who were distinguished in the healing art, and the greater tendency to honor them.

"Honor the physician", writes Joshua the son of Sirach, "with the honor due unto him for the uses which ye may have of him, for

from the Most High cometh healing and he shall have the honor of the King. The skill of the physician shall lift up his hands and in the sight of men he shall be in admiration. The Lord hath created medicines out of the earth and he that is wise shall not abhor them. . . . Then give place to the physician for the Lord hath created him; let him not go forth from thee for thou hast need of him."

This heritage of honor, of dignity, and of respect which is so peculiarly the physician's is so inextricably related to, and so closely interwoven with the history of medicine that it is greatly to be regretted that so many regard any excursion into medical history as of no practical or immediate value, as without any relation to or connection with the problems of today, and merely as a pleasant, if unprofitable, by-path in which the dilettante may stroll to glut his fancy or arouse his imagination.

As Crookshank⁽¹⁾ has said, however: "Whilst the successful, nay, the competent practice of medicine—an art which includes that of surgery—may be and often is compatible with ignorance of the history of medicine, he is the best physician in the classical and fullest sense of the word who unites a mastery of his art to an intimate acquaintance with the great historical doctrines and the philosophies upon which they are based."²

To some, in this practical age, such a view may appear idealistic and of no practical value or application. If we cannot agree with Andrew Long that "the little present must not be allowed wholly to elbow the great past out of view", at least we can ponder upon the words of Littré: "There is nothing in the most

advanced contemporary medicine whose embryo cannot be found in the medicine of the past." If an excursion into historical medicine does nothing more than bring a realization of that of which all must be dimly conscious, a change, or perhaps it may be better described as a retrogression of the relation existing between the physician and the public; if it leads to thought as to the cause as well as its effect, it will be, indeed, not without profit.

There is an old saying to the effect that "times change and men with them", and even the most unobservant must be conscious of the fact that the standing of the physician in the eyes of the public is often not what it was in the time of Aesculapius, of Galen, or the days of "the gold-headed cane". Every generation has a natural tendency to regard the problems of its time as new, strange, and unheard of, as phenomena never before encountered in the history of the race. We marvel, at present, at the ignorance and fanaticism which tends to obstruct the efforts of preventive medicine to control and eradicate disease; we wonder and must even be amused at the credulity which enables strange and absurd cults to originate and flourish for a time at the expense of the sufferer seeking relief; too often, succumbing to the tendency to give pious thanks that we are not like unto these, and drawing about us the cloak of complacent disdain, we may even disavow any relation to or responsibility for so lamentable a state of affairs.

Are these new problems? Hear the words of the Arabian, Rhazes, written in 852 B. C. "Upon the circumstances which turn the hearts of most men from reputable physicians":

"Among those factors which make the people turn away from the intelligent physician and place their trust in impostors is the delusion that the physician knows everything and requires to ask no questions. If he inspects the urine and feels the pulse he is supposed to know what the patient has eaten and what he is doing. ***** Another circumstance which brings the physician into contempt is that many diseases are too little removed from the borderline of health and are thus difficult

to recognize and to cure; others, malignant in themselves, externally appear trivial."

Ignorance and credulity are not modern inventions. The criterion by which physicians are judged is the same now as it was centuries ago—the rapidity with which he causes a symptom to disappear—and the reputation of doctors depends, now as then, not only upon results but upon the acceptability to laymen of their explanations of the phenomena of disease. The patient has always gone to the doctor, not because he is sick, but primarily because the manifestations of his sickness have become such as to interfere with his ordinary habits of work or play, and so occasion alarm. The public sees only the symptom or collection of symptoms which strike the imagination and arouse apprehension and for which there should be a remedy which the physician will apply more or less appropriately according to the degree of his skill. It matters not how skilled the individual in the arts or sciences, how learned in the higher mathematics or in the mazes of law or philosophy; let him be sick and the most amazing abysses of ignorance and misconception are often brought to light. Ignorance and disease go hand in hand and ignorance wedded to credulity brings forth the quack and charlatan, and the Doctor of Absurdity.

Practically all irregular—not to say weird and ridiculous—methods for the treatment of disease are founded and thrive upon the fact that the average human being has only the haziest idea of the human machine and the mechanism whereby its functions are performed. Physicians are often astonished, and were it not for the frequent disastrous aftermath, would often be amused to find a patient, otherwise well-informed and intelligent, who gives a history of treatment by various irregular methods, for the subjects of the oscilloclast, even as the bygone champions of the Perkin's tractors, are by no means always of the "ignorant classes". One often hears surprise at the ignorance and credulity thus exposed, but seldom is there any recognition or evidence of appreciation of the relation of the doctor to the situation as it exists.

Is it not possible that the medical profes-

sion should assume some measure, at least, of responsibility for the ignorance upon which the credulity of the laity is based? Are we in any way responsible for the fact that there are people who "don't believe in doctors" or in what the doctor says; who go from the office of one physician to that of another to "check-up" on what the first has said; or for the fact that there are others who believe, because they "saw it in the paper" that Dr. So-and-So has discovered a cure for cancer and tuberculosis known to no other living man?

Is it not the ignorance and credulity of the laity comprising the newspaper world, coupled with an insatiable thirst and avidity for publicity, which leads to the periodic flaring across the printer's firmament of medical "discoveries", when head-line material is temporarily scarce?

It is true that the ignorance of the laity concerning medical matters is recognized and that efforts are made toward the education of the public and that various means are applied for this purpose. There are, it is true, so-called "health columns" in the daily press, many of which, however, fail of their purpose because, though honestly and earnestly conducted, it is one thing to have knowledge and another to impart it to some one else. Those which are reliable, moreover, cast the shadow of their respectability upon others which are merely the source of propaganda.

To some, if not an equal, extent this is also true of the radio. In the last analysis the most fallow field for instruction is right at hand and within the reach of every doctor—his patients. The place to instruct the public, to dispel ignorance, and to minimize credulity is, first of all, in the doctor's office.

Every physician will encounter the grossest ignorance and the most absurd ideas in those who consult him professionally and in every professional contact with every patient there is an ample and a most favorable opportunity to dispel a certain amount of ignorance, to remove or adjust misconceptions, and to instill, even though it be but in minor degree, a certain amount of correct information.

On the other hand, by slipshod methods or by careless, casual agreement with the patient's

idea that all his ailments are due to indigestion, a "run down condition", or other similar pathologic nonentities, the physician may perpetuate and indirectly extend ignorance.

Nothing is more discouraging nor depressing to the honest, careful and thorough physician than to encounter cases of malignant disease or late syphilis when they are to all intents and purposes hopeless and to realize that this might have been avoided if only the patient had applied for aid at a propitious time, and to realize, further, that his reason for not doing so was because of a belief, for example, that as taught by a popular "physical culture" magazine, syphilis is curable by a milk diet, or cancer by a diet or by "cancer pastes".

We may rail at or regret the ignorance of the patient but are we doing *all* in our power to dispel it?

Consider the patient, trudging from office to office accumulating such diagnoses as "thin blood", "thick blood", "sluggish liver", "stomach full of gas", various "conditions", and so on and so on; consuming for their relief vast quantities of remedies often based upon if not originating in the "literature" furnished by the assiduous "detail man".

Is there any significance in the fact that far too many patients see no incongruity in the fact that he may tell his story—briefly—advance *his* opinion as to what is the matter with him, stick out his tongue, have his pulse felt and in the next minute hear the diagnosis? Is it any wonder that, his innate belief in the omniscience of the doctor thus bulwarked by a concrete experience, he later receives with equal faith the pronouncement of the quack or the charlatan?

Consider the patients who regard the taking of the blood pressure a diagnostic procedure of almost superhuman omniscience. Is it any wonder that the radiograph of the chiropractor holds for them an almost miraculous significance?

He believes because he does not know any better, and he does not know any better because efforts to teach him are most often made when he is well or, at least, symptomless and

relatively little interested, and seldom when he is ill, anxious, and eagerly receptive.

The pill-peddling physician, the careless physician, the pseudoscientist who probes the depths of pathology with a single urinalysis or blood count, are all responsible for perpetuating if not encouraging lay ignorance and thus serve—even if unknowingly—as more or less direct feeders to cults and irregular practitioners because of their failure to enlighten the patient or to disabuse his mind of the idea that an *immediate* diagnosis and an immediate cure should be, at all times, possible.

Patients must be taught the truth: that symptoms are not diseases but merely the manifestations of disease and that every case, no matter how simple on the surface, warrants a careful, thorough study if only to determine what is functionally efficient as well as to detect what is wrong.

The less mystery there is about the practice of medicine the better. The public must be taught that it is not a matter of magic or a revelation granted only to the few, but a science and art calling into play the highest qualities and demanding the most assiduous application of learning, skill, care, and meticulous attention to detail. The public must respect the doctor, not from awe or fear, but for what he knows and how he demonstrates his knowledge by what he does and the manner of its performance; and such an appreciation is borne and fostered, nourished and augmented, not in the columns of the newspaper or through the loudspeaker but in the office and by the bedside.

If every patient were first thoroughly studied *and the necessity for the study made clear*; if the disturbed functions were thus brought to light and their mechanism explained; if a definite effort were made to make intelligible to every patient the nature of his illness and the relation it bears to his symptoms as well as something of the rationale of the remedial measures to be employed; by so much would ignorance be dispelled and blind credulity be destroyed.

Every doctor should be eager to seize every opportunity which presents itself to explain in *simple, direct, and understandable* phraseology the tenets of preventive medicine, to make

clear *why* certain methods are employed and when they are efficacious. Nothing will ever be achieved by leaving it to the other fellow.

The doctor should be the source of true and correct information and his patients should be quick to appeal for, and confident of receiving it. If his own concepts and ideas are so muddled or so hazy as to render him incapable of imparting it he may well ask himself seriously if he is fit for the practice of his profession. At least he may refrain from the careless terminology which tends to perpetuate if it does not inaugurate ignorance and error.

The physician must not only demand or expect, he must *deserve* the confidence of his patients; he must not trade upon their faith but earn their admiration.

1. Crookshank, F. G.: Foreword to *The History of Medicine*, C. G. Crumston, 1926. A. A. Knopf, New York.

THE CARDIAC CHILD; A PROGRAM

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The futility and inadequacy of our treatment of the child with heart disease is so apparent as to make every worker in a children's service or in the field of public health wonder whether there is any remedy for it. We see so many competent clinicians carry these cases along to what appears an inevitable conclusion that a purely theoretic approach seems dangerous. However, analysis of the method of treatment and comparison with the successful work done in tuberculosis makes one hopeful of the possibilities of improvement. Heart disease in children presents to the observer, who takes a slightly larger view than that of the individual case, a striking similarity to the question of incipient tuberculosis. In both cases we have a lesion that, unobstructed, is of the progressive type; that

usually cannot be cured but only arrested; where, in the arrested stage, safety lies only in constant care and supervision; and where the arrested case is an asset to the community and the neglected one a liability. The danger existing to the community at large from an infectious case of tuberculosis is, however, absent in heart disease and may be the cause of its comparative neglect. The purely economic viewpoint may be over-emphasized but is undoubtedly of real importance. From consideration of available hospital space alone one can grasp the waste caused by the neglect of these patients.

Carrying further the analogy to tuberculosis, the worth-while treatment is not so much treatment of the well established case as of those cases in the incipient or the pre-decompensated stage. I believe it will be a matter of surprise to most practicing physicians to see the real incidence of definitely established cardiac disease. Apparently, with a decrease in the death rate in infantile and childhood diseases, as demonstrated by our decreased infant mortality rates, the number of children with cardiac lesions is on the increase. Our mortality statistics for the City of Newark, New Jersey (1926) with a total of 5447 deaths from all causes, report 850 with cardiac disease as the primary cause of death, mostly of the valvular type, and of these victims, 48 were under 15 years of age. The total mortality from tuberculosis, formerly the most virulent disease, was 335; less than one-half the number of cardiac deaths. Is it unexpected then that the figures gathered by Cohen in the last war draft give an incidence of 2%? How strikingly constant this figure is may be seen in the reports of the examining physician at Yale and by J. Baker for the public schools of the city of New York, both of whom also report an incidence of 2%. Reilly gives as high as 5% in general practice. Our own experience in the public schools of Newark, although not completely tabulated, inclines us to believe that the incidence here is also from 1½-2%.

What is being done for this great mass of our school children? One child in every 50, or about one child in every class, is af-

fectured with a condition that may prove to be not only a cause of lowered economic value but even a danger to its very life. Fortunately, steps are now being taken in some communities according to the plan of the American Heart Association for attacking the problem from a broad social basis with a promise not only of relieving symptoms but possibly of reaching a real fundamental plan of treatment.

There will be no attempt in this paper to discuss either the etiology or pathology of heart disease. The congenital heart cases form only a small percentage of this group, and are of even less importance. Those who are fundamentally unfit seldom survive long enough to be a problem and those with purely anatomic lesions are matters of pathologic rather than social interest. The acquired heart disease grouping follows to a great extent as pretubercular, incipient, arrested and active cases. These have been classified by the American Heart Association as Classes I, IIa, IIb, III and IV. The problem of classification has been admirably discussed by St. Lawrence and others in a paper on "The Requirements of an Ideal Heart Clinic".

The first essential is a review of cardiac work being done at the present time. In the City of Newark this may be divided roughly into 4 groups: (1) The public schools; (2) private physicians; (3) hospital out-patient departments; (4) hospital wards.

Work in the public schools must necessarily confine itself principally to diagnosis and to adjustment of school routine to the child suffering from cardiac disability. The Class I cardiac (with an organic lesion and no disability) under proper and systematic supervision may very well be left to take part in all school activities. The Class IV child with purely accidental findings also fits into this group. Although it undoubtedly would be wisest to have all systematic cardiac work in the city originate and radiate from the public school, there are definite disadvantages. The problem of obtaining specialists, and separation of the clinic from the essential hospital, are the most important ones. Under the present arrangement, fully one-half of the cases

of heart disease are discovered originally by the school physician. The only practical recommendations here are increased facilities for these examinations and availability of a special cardiac consultant. The central cardiac clinic should be closely linked to the school system, both through its patients and its administration, in order to get the best results.

The second factor is the family physician. About one-half of all cases are first diagnosed by him and all of them ultimately come under his care. In comparatively few families are the services of a cardiac consultant available if the child is not seriously ill. We cannot too strongly emphasize that the value of the consultant and treatment are great only in the children apparently well, and that in the decompensated child their influence is unfortunately extremely small as regards the ultimate outcome. Further, the examinations and refinements possible in judging cardiac reserve and the teaching necessary in the follow-up work are impossible for the family physician to carry out unassisted. The advantages of the nurse, teacher and social worker in this field can only be made available through establishment of a central cardiac clinic. This does not mean that control of the case shall be taken away from the attending physician, but that the facilities of the clinic shall be available to him in a consulting and teaching capacity.

Thirdly, as regards the out-patient department of the general hospital; very often the general hospital supplies a special cardiac service, but usually such heart cases are referred to the regular pediatrician or medical attendant. Full cardiac work-up without admission to the ward is seldom available under present arrangements. The follow-up and social work, on account of incidental expense, is practically ignored. Experience has shown us that most of the cardiacs attend the out-patient department after a primary decompensation and that even those whom we see early enter the ward ultimately in state of decompensation. Work of this type, when carried on by only 1 or 2 men without extensive facilities, is of very little value.

The hospital ward is the ultimate goal of most of these patients. They are admitted in decompensation as in former years tuberculous patients were admitted with extensive cavitation and hemorrhage. That these admissions are too late is shown by the occurrence of 1 or 2 remissions with discharge and re-admission until finally death closes the record. This admission and re-admission is what makes the writer feel that all our hospital cardiac work is of very little value. The ordinary history of these cardiacs is very instructive. The case that comes in acutely decompensated is in very few hospitals kept more than 4 weeks. The service is an acute disease hospital and the demand on the hospital for beds for acute cases makes it seem desirable to send them out as soon as they are recompensated. But, does the tuberculosis sanatorium discharge its patient as soon as he no longer has a temperature? The long continued hospitalization and the extensive after-care which are absolutely essential to the decompensated cardiac will be furnished nowhere except in a cardiac center or service, and cannot be justly expected from a general hospital or an acute medical service. The chronic cardiac is absolutely at a loss, as hospitalization for him, except in extremes, is not available and probably not advisable. Nevertheless, the chronic case requires supervision and occasional institutionalization, or at least an elaborate follow-up system, to obtain the best results. The convalescent cardiac from the hospital ward is sent home and lucky is the hospital where the social worker makes more than 2 calls and nurses more than 1 after his discharge. There are in this community no institutions available for the after-care of these patients. As has been pointed out in the clinic, so it is in the hospital; there is no adequate provision for after-care and education of these patients.

The type of cardiac work we wish to recommend is neither new nor unduly complicated. It is necessary that it center about a hospital that has the facilities for complete cardiac study and beds available for prolonged courses of treatment. The active portion of this system is the cardiac clinic. This cardiac clinic should be either at the hospital

or in a centrally located part of the city, and its hours should be such as to be most convenient for the patients. An evening clinic should be conducted for the older patients. This clinic should be officially connected not only with the hospital but with the school system and the local department of health. All cardiac work in the city should arise from this group and all efforts should be made to centralize it. To this clinic should be attached not only the cardiologist and his assistants, but competent pediatricians and internists. The nursing staff must be regarded as of extreme importance and must be well trained not only in nursing of the decompensated cardiac patient, or the sufferer from cardiac disease with an intercurrent illness, but also in the technic of cardiac exercise and observation of danger signals. The Social Service Department is also one of the key units. It must be competent not only in institutional and convalescent care, but also in readjustment of the patient to his economic environment. The center should also be the origin of general education in cardiology and, especially, in the propaganda for preventive medicine. Mechanical equipment should be available either at the center or the associated hospital and should include at least an electrocardiograph and x-ray facilities.

The hospital ward should be under control of the same men who are on the central clinic staff so that observation and treatment may be continuous. It is especially important that comparatively long hospitalization under as pleasant conditions as possible be available. It is also worth while to have facilities for admission for study of chronic and undecompen- sated cases.

The follow-up system with nurses, teachers and social workers is the crux of the whole project. Repeated examinations, careful observation and systematic follow-up, are the price of cardiac health. Records must be complete, both for their benefit to the individual and their value as material for study. It is essential that labor adjustment be made in all these cases. The brilliant success of the ad- justment of cripples to society holds out great hope for this field of endeavor. The question

of pregnancy in the cardiac woman must be considered, and arrangements must be made for her care and confinement or for the pre- vention of conception to avoid the necessity of interruption of pregnancy in this type of case.

Briefly, the value of a system of this kind is as follows:

(1) It centralizes the cardiac work of the city and allows for a better grade of work and more adequate facilities.

(2) It brings all the varying factors into a common group and leads to development of a definite program.

(3) By proper supervision of early cases, it avoids many unnecessary cardiac deaths and decreases cardiac disability.

(4) It acts as a central group interested in cardiology.

(5) It furnishes to the physician of the community a cardiac consulting bureau equipped to carry out a teaching program. It represents an attempt to put cardiac work on the same basis and with the same hope of success as the tuberculosis work and the work for crippled children.

THE SOCIAL ASPECT OF HEART DISEASE IN CHILDHOOD

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There is a deplorable lack of facilities in the City of Newark, and for that matter, in the state of New Jersey, for the proper and constructive care of persons suffering from heart defects. When we are told that heart disease is now the greatest single cause of death in this country, when we are assured that much of it is preventable, when experience has taught us that much of it is improvable through the adoption and practice of a simple and intelligent program of supervision; when, on the other hand, we hear of the vast sums

of money expended annually by public charities on families disrupted, disorganized and pauperized because of diseased hearts, of the father who no longer has an earning capacity, of the mother who no longer shares the responsibility of family life but becomes herself a burden; when we recall the human misery, the blasted hopes, the shattered dreams of all that might have been, is it any wonder that we urge the application of a little intelligence to this problem of heart disease in our community?

It is a generally conceded fact that the major part of the treatment prescribed by physicians today for patients suffering from heart defects consists of rest—simply rest. For people of unlimited means this holds no terror. For the vast majority of our population, however, there is no recommendation that could be more infinitely ridiculous. Where is this rest to be had?

The general hospitals fight shy of cardiacs, and we cannot blame them. They are acute disease hospitals, equipped to take care of the acute ill. The average length of stay in such hospitals is something like 12 days per patient. The heart case frequently, according to statements issued by the American Heart Association, requires bed care for a period of many months. A children's ward, such as we have in most of our hospitals, would be completely closed to acute cases were no attempt made to regulate the types of admissions and to limit the number of cardiac cases.

But, for lack of other facilities, the general hospital is bound to accept some cardiacs. What then? The patient may no longer be confined to bed; the focus of infection such as diseased tonsils, adenoids, or infected teeth, may have been removed; all swelling may have disappeared; the patient may now be able to walk about, breathe quite freely and exercise moderately, but.....what then? He goes home, and within the course of a few months, possibly a few weeks, is back asking for re-admission, frequently is in a worse condition. All the time spent in the hospital has been for naught; the cost to the hospital has been completely wasted; the doctor's time has been given in vain.

Where, then, is the hitch? The answer is that there must be some half-way place between the hospital and home, a place that combines the advantages of a hospital with the everyday elements of a normal life. In other words, a patient just recovered from the acute symptoms of a damaged heart is not ready to be plunged back into a normal active life. He requires prolonged convalescent care in an institution where he can get the necessary rest, and at the same time prepare for the kind of life he is resuming. Resumption of normal activities must be undertaken gradually; the patient must learn what he can and what he cannot do; he must learn to adjust his physical life according to the dictates of his heart condition and, what is still more difficult, he must learn to adjust himself mentally so as to be happy and content in spite of restricted physical activity. In short, he requires complete reëducation in the art of living to the tune of how to be useful and happy though a cardiac. This can be done only under careful and intelligent supervision by specially trained people supplied with proper facilities for their tremendous task.

Let us start with the child, as he presents the most hopeful outlook in this picture. Our problem resolves itself into 2 very simple but diametrically opposed phases—improper versus proper care; unrestricted versus restricted activity and increased rest; irrational living vs. regular routine and orderliness; further impairment vs. gradual improvement; lack of training for any occupation compatible with the limitations of a diseased heart vs. thought-out vocational guidance and instruction in some occupation of which the heart is capable. Depending on which phase, the former or the latter, is followed throughout childhood and early adolescence, the child will either die at an early age or, if he survives, will grow up a sickly, ailing, unhappy person with no means of support, a burden to himself, his family and the community; or he will live to a ripe old age, a happy, independent and useful member of society. The choice rests not with the child but with the community. The community of Newark has failed its cardiac children. It offers no alternative to improper care; 9 times

out of 10 the parents would do all in their power to secure proper care were it within their reach. Crowded home conditions, ignorance, poor mentality, mismanagement with its attendant chronic fatigue, lack of discipline, lack of guidance, lack of incentive and inspiration, the high cost of medical supervision, and a million other conditions combine to hold them down, to make it impossible for the handicapped youngster to get a fair fighting chance.

"The value of the sanatorium treatment of convalescent cardiacs", according to the American Heart Association, "has passed the experimental stage. Experience with selected groups of children and young adults has shown the tremendous value of institutional treatment in securing a degree of recovery which affords them the opportunity for useful lives and self-support. The results obtained by the Burke Foundation, which has cared for over 2000 selected cases in the past 6 years, are most convincing. Of 130 boys between 10 and 16 years of age received during the first 2 years and carefully followed, 85% have remained steadily at work or at school since leaving the institution." This statement made by a highly specialized organization that has long studied the situation cannot be disputed.

Our first step, then, in the adoption of an intelligent heart program, is the creation of a Heart Center (whether it be called convalescent home or sanatorium is irrelevant). This Center should offer bed-care to all cardiac children for as long periods and at as frequent intervals as deemed necessary. This care should include, for each child, training in proper health habits essential to his condition, graduated exercise, slow resumption of normal activities and general adjustment.

But the Center must go further than this if it would effect any lasting results. It must form the solid nucleus of a great community heart program with tentacles reaching far out into every phase of child life. It must follow the child into the home. There is nothing more futile than to improve a child's heart condition in an institution, more through the means of rational living than any medication, and then to send him home to an irrational

mode of living; to accustom him to limited activity and then to send him back to a home located 4 flights up; to establish an early bed hour and then to send him home to a *laissez-faire* principle. The child's coöperation secured in the institution must be continued in the home, and the parents must be instructed in the special care necessary.

I recall the mother of a cardiac child who attributed the underdeveloped condition of the youngster to lack of exercise. In order to overcome this, she would force him to take a good 40 minutes' walk to the clinic where he was under medical supervision for his heart condition. I remember another well-intentioned mother who could not understand why her cardiac boy chose to run wild on the streets rather than remain quietly at home, and yet who made no effort to make her home sufficiently attractive to compete with the street.

It is a curious fact that many cardiac children are prone to develop bad tempers. A vicious circle of bad heart and bad temper makes cardiac supervision imperative. Proper supervision should extend over a period of years—from the moment of detection to the time the child is suitably placed and safely on the road to independent manhood—its intensity depending on the make-up of the individual child and his home surroundings.

The Center must follow the child into the schools. It should establish a close coöperation with the educational system to aid in the early detection of heart conditions in school children and to provide special care for them, such as ground floor classes to eliminate stair-climbing, special routine to avoid over-strain, and any other necessary adjustments.

The Center must take up the problem of vocational guidance of cardiac children. On this phase of the work hangs the fate of the future economic independence or dependence of a large portion of the coming adult population. These handicapped children should be trained for occupations that will yield decent normal living conditions. They cannot work at processes requiring strength rather than training. Practically, it means that a good many children must be guided into and educated up to occupations quite different from

those with which their families are familiar. How often we come across adult cardiacs too sick to live by virtue of their brawn, yet lacking the necessary training to qualify them for the lighter occupations within their capacities. The result is complete dependency and certain tragedy.

It is important also that the Center shall work hand in hand with the acute disease hospitals of the city. After a hospital has carried the child through the acute stage and has discharged him in an improved condition, it should be the business of the Center to assume full responsibility for keeping the child in this improved condition and to prevent future relapses.

Of course, such a Center would have as its primary object the control and prevention of heart disease in the community.

The question may be asked, "Is it possible to use the existing convalescent facilities of the community for the care of cardiac children?" Definitely, no. Newark boasts of but 1 real convalescent home, the Theresa Grotta Aid Convalescent Home, a small place of 17 beds for Jewish patients, located in North Caldwell. Though excellent for general convalescent purposes, it has neither space nor personnel for this specialized problem. Of the 11 convalescent homes of New York City that accept cardiac children, 8 have refused outright admission of New Jersey children, and the remaining 3 have agreed to accept them only after the New York waiting lists have been exhausted, which amounts to the same as a refusal, as there are no convalescent beds that are so much in demand or more constantly in use than those reserved for cardiac children.

This problem of providing proper care for our cardiac children is a very important one, but one which has been shamefully neglected. The crippled children readily win recognition everywhere, but the cardiac children seldom come under observation of the general public. To those of us who have seen them at close range, it is a very sorry sight indeed. Time after time we have seen them return to the hospitals, each time in a worse plight, each time less alert and less responsive, with eyes that showed the strain of long suffering

and glances that looked at us reproachfully. And we know that had we had the right facilities, had we been able to teach them to take proper care of themselves, had we been able to prepare their homes and their families for their return, to watch them, to guard them and to guide them; had we possessed proper facilities, we know that we could have forestalled their cruel suffering.

We, therefore, submit this recommendation in all sincerity, being firmly convinced from personal observation that there is a crying need in the community for this work, and that such an understanding would be joyously welcomed by every social and health agency as a tremendous step forward in the alleviation of much suffering, in the prolongation of life, and, in the long run, in a decrease of dependency.

TUBERCULOSIS IN INFANCY AND CHILDHOOD COMPARED WITH THAT IN ADULTS

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Tuberculosis is the cause of one-twelfth of all deaths and it occurs in 100 of every 100,000 people. Historically, evidence of tuberculosis has been found in Egyptian mummies and descriptions of tuberculous lesions are found in some of the oldest Grecian literature. Hippocrates described tuberculous lesions. Sylvius first named the lesion a "tubercle" and Laennec first accurately described the clinical diagnosis of pulmonary tuberculosis and showed that scrofula and bone and joint tuberculosis were related infections. It was later learned that tuberculosis was transmissible, and in 1865 it was thought to be an infection with a particular virus. In 1881 Koch discovered the tubercle bacillus as the cause of tuberculosis and this was one of the great advances during the foundation of the germ theory of disease.

There are certain factors which predispose the individual to tuberculous infection and lowered body resistance so that reaction of the infection is unfavorable and tuberculosis becomes manifest in some one of its various forms. Individuals are infected with tuberculosis from the people about them and the number of germs to which one is exposed is important. If an individual is continually exposed to small doses of tubercle bacilli the immunity developed is protective. One large dose or too frequently repeated small doses may break down resistance and allow the disease to develop. There is no doubt that heredity plays at least a small part in the etiology of this disease, by the inheritance of predisposing factors. Most important in these cases, however, is early exposure of the child to tuberculosis. Rachitic deformities no doubt predispose to tuberculous infection.

Tuberculosis often follows upper respiratory disease and it is most frequently misdiagnosed as influenza. It often follows pneumonia, influenza, sinusitis, pharyngitis, laryngitis, and bronchitis. Heart disease does not appear to be a predisposing factor. Thyroid and pancreatic insufficiency, cretinism and diabetes, are looked upon as predisposing to tuberculous infection. Scarlet fever, measles, and whooping cough lower the child's resistance to tuberculosis. The social status of the patient seems to bear no striking relationship to the liability of tuberculous infection.

It is important to make the diagnosis of tuberculosis as early as possible so that the patient and family can arrange for immediate treatment and take the necessary precautions. No physician should ever make a "snap" diagnosis of tuberculosis for it may lead to a great deal of injustice and to actual despondency. If no symptoms are present the disease is not active. Pain plays little or no part in the symptomatology. The usual symptoms are as follows:

Cough. This at first is caused by upper respiratory difficulties, such as laryngitis or pharyngitis, and, later, by excessive secretion from the diseased part of the lung. In children this is a very important symptom and may be the only one present. In glandular

tuberculosis the cough is caused by irritation and pressure upon the primary bronchi. Nervousness increases the cough. The types of cough are either nonproductive, productive, paroxysmal, asthmatic or emetic in nature.

Fever. Slight elevations of temperature in the late afternoon and subnormal temperatures in the morning are commonly found. If the temperature rises 3 or 4 times a week to 99.4° it is significant.

Hemoptysis is an initial symptom in about 15-20% of cases. This should be considered as due to tuberculosis unless proved otherwise.

Dyspnea. This is not complained of very often because it comes on so insidiously that it is not noticed until late. In children, slight cyanosis may appear before the shortness of breath is apparent.

Weakness. This is the most common complaint and in children is noted in an apathy at play, a continual lethargy and inaptitude. It may be noted that the child tires easily and wants to stay indoors all the time. There soon appears loss of appetite and evidence of slight anemia, and with this can be found a slight lymphocytosis and a positive tuberculin reaction.

Loss of weight. This is most noticeable in the acute pulmonic tuberculosis in children and in the usual pulmonary tuberculosis of adult life. In children there may be only a failure to gain weight, instead of an actual loss. Among the less frequent symptoms are a rapid pulse, nausea, vomiting, gastro-intestinal upsets, nervousness, irritability and insomnia. The diagnosis of tuberculosis in children is frequently obscured by these less frequent symptoms and it requires somewhat keener observation and study to reach a positive diagnosis.

Among the signs found in a case of incipient pulmonary tuberculosis are the following:

(1) An alteration of the muscle tone over the area involved. In an early case there is muscle spasm determined by increased tactile fremitus and, later, there is muscle atrophy and lack of full expansion.

(2) Alteration of resonance. Usually there is an increase of dullness at the apex

and this is most commonly found on the right side.

(3) There may be marked increase in parasternal or paravertebral dulness.

(4) There may be pleurisy with effusion giving signs at the base.

(5) On auscultation at the apex, sticky râles, moist râles or ronchial râles may be heard. These are best heard in what is called the "alarm area" opposite the level of the scapular spine.

(6) A friction rub may be heard low down in the axilla or, less frequently, at the apex.

(7) There is usually no alteration in the voice sounds in the incipient case.

(8) Laboratory tests, such as the Roentgen ray and examination of the sputum for tubercle bacilli, give valuable confirmatory evidence.

Among the common conditions giving rise to symptoms similar to those of tuberculosis are:

(1) Mild enlargement of the thyroid gland producing dyspnea, cough, loss of weight and night sweats.

(2) Chronic sinusitis may cause reflex coughing and all the other symptoms of tuberculosis.

(3) Mild bronchioectasis following some acute respiratory disease.

(4) Unresolved pneumonia.

(5) Aspiration of a foreign body.

(6) Lung abscess.

(7) Syphilis.

(8) Fungus infection of the lungs, such as actinomycosis, blastomycosis, or sporotrichosis.

(9) Malignancy of the lung, primary or metastatic.

(10) Pneumoconiosis.

(11) Chronic bronchitis.

(12) Asthma.

(13) Heart disease.

There are certain characteristics of tuberculosis in infancy and childhood which deserve special consideration. Of 349 children who came to the out-patient department of a Boston hospital complaining of loss of appetite there were 24 who had tuberculosis. This is probably twice as many cases as would be

found in an unselected group of children. In other words, the incidence of tuberculosis in children is about 2 to 5 per hundred children. Tuberculosis is less common in infants, and, the younger the infant the more rapidly fatal is the disease. It can be considered almost invariably fatal under 2 years of age. If before 1 year of age an infant shows positive tuberculin test the prognosis is serious for life. At this age tuberculosis is usually an acute disease due to the miliary type of infection or acute pulmonic tuberculosis. In the miliary type the mortality is 90% and in the acute pulmonic type it is 60%. Here the diagnosis depends largely upon the history, the fact of exposure, a positive tuberculin test, physical examination and the radiogram. Auscultation and percussion are useful as confirmatory measures but are not diagnostically definite. Collection of sputum is difficult or impossible but the organisms are frequently found on throat swabs if frequently and repeatedly examined.

In children between the ages of 4 and 12 years we generally deal with glandular tuberculosis, either in the cervical or axillary glands or in the hilus glands. These children show enlarged glands and there is usually a history of exposure to tuberculosis. This child looks below par, has a slight anemia, tires easily, is inactive, may have chills and fever, loss of appetite, night sweats and, frequently, a hacking cough. Examination shows poor general nutritional state, pallor, enlarged veins over the chest and in the neck, poor chest expansion, a long narrow thorax with narrow superior strait, and there may be some increase in the parasternal or paravertebral dulness. This dulness is rather diagnostic when elicited. Listen carefully for signs of pressure on the main bronchi. This may best be heard over the manubrium when the child is standing; then, by bringing the head back, mediastinal structures are thrown forward and a bruit may be heard in the vessels of the neck. With the patient sitting erect with the head bent slightly forward, tracheal voice sounds are heard to the first dorsal spine under the age of 5; and between the ages of 5 and 10 the voice sounds are heard as low as the sixth dorsal

pine. If the tracheal voice sounds are heard lower than usual it is considered an important sign of enlargement of the hilus glands. In these cases the intradermal tuberculin test is nearly always positive and x-ray examination if carefully done and carefully interpreted will render important confirmatory evidence toward a diagnosis.

A diagnosis of glandular tuberculosis can be made whenever any 4 of the following cardinal signs are present:

- (1) Loss of weight without apparent cause.
- (2) Persistent fever.
- (3) History of exposure to tuberculosis.
- (4) Anemia with slight lymphocytosis.
- (5) Palpable glands having been present for some time without any apparent cause.
- (6) Chest symptoms such as cough, dyspnea, pain or general oppression.
- (7) Chest signs such as dulness, d'Esquigne's sign or x-ray evidence.
- (8) Positive tuberculin test.

In glandular tuberculosis the prognosis is very good. Most of such patients get well in a few months when properly cared for but the younger and the older patients should be watched most closely for they are prone to develop pulmonary tuberculosis from extension of the glandular process. In the younger children this extension most often occurs along the interlobar septum and all stages of pulmonary infiltration may be seen from rather harmless looking hilus glands. When the hilus glands seen on the radiograph are irregular in shape and ill-defined they are interpreted as most dangerous. When focal necroses are found in the apex in children it is called the "adult form" of tuberculosis and when the extension and infiltration arise definitely from the hilus it is spoken of as the "childhood type" of basal tuberculosis, and is frequently accompanied by pleurisy with effusion which is considered to be due to tuberculosis in the majority of cases. Pulmonary infiltration from the hilus glands may occur long before it can be clinically recognized or even before the roentgenogram is definitely positive. It is considered important that the diagnosis of tuberculosis in in-

fancy and childhood should not be made unless several factors are considered, because no one procedure will render every case recognizable.

GENERAL TREATMENT

Absolute bed rest until symptoms subside. This measure must be strictly adhered to and prescribed as definitely as any other form of treatment.

Fresh air, avoiding exposure. This is essential 24 hours of the day.

The diet must be adequately high in calories to prevent loss of weight. In the presence of edema or a pleural effusion, a salt-free diet is of advantage and it seems to help in most cases to make the diet relatively high in carbohydrate and in protein to compensate for the excessive nitrogen metabolism which always accompanies the fever.

Mental rest is considered important and the patient should be kept in a hopeful mood and free from anxiety.

Ultraviolet ray therapy either directly from sun exposure or indirectly from a mercury-vapor lamp is considered helpful in most cases but is not advised in frank pulmonary cases except when complicated by intestinal tuberculosis. It is most valuable in glandular and bone and joint tuberculosis.

MEDICAL TREATMENT

Ordinary antipyretics may be employed with discretion.

Atropin is given for night sweats when they are troublesome enough to warrant attention.

Cod-liver oil has proved of value in the treatment of children with tuberculosis, will aid in preventing loss of weight, and will stimulate appetite and bodily vigor.

Codein is the most dependable remedy for the cough.

For hemoptysis, use a semi-Fowler's position and give morphin for rest. In obstinate cases it is advantageous to employ hemostatic serum after the patient is desensitized, or, calcium chloride 1 gm. in 10 c.c. of sterile water may be used intravenously, care being taken not to inject outside the vein.

The pain occurring with pleurisy can be

treated by strapping the affected side with adhesive and giving mild analgesics.

Cardiac stimulants are helpful when indicated and restlessness is treated with bromides.

PROTEIN SUSCEPTIBILITY IN INFANCY AND CHILDHOOD

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Much new data brought to light during recent years, in relation to biologic changes, has been made applicable to medical practice, and immunology has been so developed that prevention of disease is today well nigh the most important branch of medicine. Advances in biochemistry have resulted in a new perspective in relation to hay-fever, asthma, urticaria, erythema, edema, digestive disturbances and eczema, especially as seen in infancy and childhood.

The term "allergy" is used to designate that group of reactions occurring in certain groups of body cells which are hypersensitive to and which always react in the same manner under the influence of a specific allergen. Hay-fever and urticaria are examples of reactions occurring in 2 types of cells upon the introduction of the particular substance to which they happen to be sensitive. When these reactions occur spontaneously the term allergy is applied in contradistinction to the artificially produced state of hypersensitiveness known as anaphylaxis.

The clinical manifestations of hypersensitiveness depend upon the type of cells which are susceptible. If they are the cells of the skin, the reaction will be an urticaria or erythema; if the cells of the bronchi are sensitive, asthma will result or if they are the cells of the mucous membrane of the nose, eyes and upper respiratory tract, allergic coryza is produced. These reacting substances or allergens may be protein or nonprotein, organic or

nonorganic. They are not toxins as shown by the fact that many times the dose required to produce a reaction in the hypersensitive individual gives no reaction in the nonsensitive person. Further, it is believed that the process is a spontaneous or natural one because in infants the reaction frequently occurs upon the first introduction of an allergen, which is commonly cow's milk or eggs and in these cases the symptoms are usually gastro-intestinal with vomiting and diarrhea and often urticaria, erythema or angioneurotic edema.

An outline of the allergies of childhood would include: (1) allergic coryza (hay-fever); (2) asthma; (3) urticaria; (4) edema (angioneurotic); (5) erythema; (6) gastro-enteritis; (7) probably vasomotor rhinitis; (8) and possibly eczema.

That allergic manifestations are common among children is shown by the following figures taken from the report of a large American clinic. Of 500 hypersensitive cases including all forms of allergy, such as asthma, urticaria, erythema, angioneurotic edema, gastro-enteritis, and coryza, 55 showed symptoms before the age of 5 years; 81 developed between the ages of 6 and 10 years; and 70 between 11 and 15 years. In other words 42% of 500 cases developed before 15 years of age. We should expect a large percentage of cases to become manifest early in life since inheritance is given as the only known predisposing factor. That inheritance has a definite bearing upon the age at which allergic symptoms appear is shown by the fact that in patients who show no family history of hypersensitiveness the age of maximum liability lies between 20 and 25 years. Where as among those who give positive maternal or paternal history the point of maximum liability is reached before the fifth year. However, according to Cooke, there is no transmission of specific allergy. He cites the histories of 6 pairs of twins, in which 3 pairs manifested the same clinical hypersensitiveness but with the other 3 pairs only 1 pair showed allergy in any form, and in only one of the 12 individuals was the reaction identical with that of his forebear. Apparently then, allergy is transmitted according to the

Mendelian law of inheritance, simply as a dominant characteristic.

Abt lists the exciting causes of allergy under 5 heads: (1) Animal emanations, (2) pollens, (3) toilet powders and perfumes, (4) foods and drugs, (5) bacterial proteins.

Animal emanations include epithelial scales and dust of hair or feathers of any species. It is possible that any pollen may be the specific cause of allergy, especially coryza, but the important ones are those of the grasses, corn, daisy, dandelion, maple and poplar; these account for 95% of early hay-fever. The autumnal hay-fever is due principally to rag-weed, golden-rod, and aster. One study shows pollens as the cause of 71% of allergic coryza in children under 15 years of age.

According to most authorities, foods and drugs are the exciting cause of a large proportion of allergy seen in children, especially those characterized by reactions like asthma, urticaria, angioneurotic edema, erythema or gastro-intestinal disturbance.

Epitomizing the words of Doctor John A. Foote, of Washington, D. C., in a paper on the subject of bronchial asthma, we read: "For a century past asthma has been considered a purely functional disorder of the innervation of the bronchi due to the idiosyncrasy of the affected individual. However, experimental pharmacology has demonstrated that certain drugs and proteins are capable of producing the syndrome characterized by contraction of bronchial muscles which we will call asthma. Many investigators are convinced that practically all forms of asthma have their beginning in direct or indirect protein sensitization. However, the cases of asthma which occur in the course of cardiac and renal disease, may be proof that while allergy is a frequent cause it is not the only cause of these symptoms." Asthma is a disease often beginning in childhood; in fact according to Goodhart and Spriggs, "More cases originate in the first 10 years of life than in any subsequent decade, and it is very commonly a sequel to allergic coryza".

As noted above, food proteins are especially prone to produce such reactions as asthma, urticaria, angioneurotic edema, erythema,

and gastro-intestinal disturbances. It has been shown that when foreign proteins are introduced into an infant's organism specific antibodies may be formed which act as poisons. This occurs most commonly when cow's milk is given, and the reaction has been styled "milk idiosyncrasy". This reaction cannot, strictly speaking, be classed as an allergy since the reaction is dependent upon antibodies elaborated after the ingestion of a foreign protein, whereas allergy is a natural sensitiveness existing before the introduction of an activating substance. Milk idiosyncrasy, then, which does not develop spontaneously must be classed as an anaphylactic reaction. Some writers divide milk idiosyncrasy into 2 groups, congenital and acquired. The congenital conforms to our conception of allergy and the acquired form would be classified as anaphylaxis. The infant shows marked gastro-intestinal symptoms and a constitutional reaction; he becomes pale and weak, vomits and has diarrheal stools; there may be urticaria or angioneurotic edema; the temperature may rise to 103° F. The condition resembles that of intestinal intoxication. The attack, as a rule, is brief if the cow's milk be withheld. Schloss states that the symptoms do not appear when thoroughly boiled milk is fed, and disturbances which occurred in 5 infants when fed raw milk did not appear when evaporated milk of the same composition was given. Babies may be sensitive to the breast milk of their own mothers. Shannon reports a series of cases which were relieved of symptoms such as coryza, bronchitis, vomiting and diarrhea, eczema, and colic, when eggs were removed from the mother's diet.

The treatment of allergic conditions may be divided into 2 main parts: (a) by elimination of the causative agent, whether it be food, drugs, emanations, pollens or bacterial proteins; and (b) treatment by desensitization. In cases of food idiosyncrasies desensitization can be accomplished by feeding gradually increasing amounts of the offending protein. It is difficult to obtain some proteins in soluble and nonirritating forms for use in hypodermic desensitization, for the reason that many pro-

teins are soluble only in alkaline solvents and alkaline solutions are apt to cause marked irritation if injected into the tissues.

There are, however, a large number of proteins marketed as new and nonofficial remedies. The list ranges well through the alphabet and affords a wide field for practice.

PROBLEMS IN THE NUTRITION OF INFANTS

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The problems encountered in the nutritional diseases of infancy are so numerous and often so obscure that in a brief discussion we must, at the outset, limit ourselves to certain types of disturbances and disregard the others, while in no way minimizing their importance. Thus, we can entirely omit the entire group of diseases based on vitamin deficiency, such as scurvy and rickets; such nutritional problems as are due to infections outside of the digestive tract; also, such as are due to some glandular disturbance, most well-marked of which is cretinism.

We will here consider only those problems which have to do with absorption and utilization of the various food elements, fats, proteins, carbohydrates and water, either because of a defect in the individual organism or because of an improper balance of the food ingredients. These are primary problems of nutrition of interest to the student because of their obscurity and to the practitioner because of the difficulty so often encountered in treatment.

Given a food of the proper type, disturbances may be due to a fault in quantity. Overfeeding, by allowing fermentation in the intestinal tract frequently leads to vomiting, diarrhea and stationary weight. Underfeeding is very common. Some infants, in spite of the food being sufficient for their caloric

requirements, suffer from inanition. This is true of those convalescing from disease, also those who have a great deal of motor unrest, and frequently may be noticed in the restlessness of eczema. It is common in breast fed babies where the lack of nourishment is not noticed because the infant does not act hungrily.

Qualitative disturbances are seen most often in artificially fed infants. Years ago casein was supposed to be the chief factor in digestive disturbances. We now know that cow's milk casein rarely causes trouble; that in spite of the chemical and quantitative difference from mother's milk casein, infants can digest apparently large amounts without difficulty. It is important that enough casein be given, certainly as much as there would be in the proper amount of mother's milk, otherwise there cannot be sufficient growth. If an infant does not receive enough protein his growth is retarded, he becomes anemic, the muscles are soft and flabby, and there is less resistance to infection.

Many of the injuries produced by milk are thought, according to the investigations of Czerny and Keller, to be due to excessive fat. While there is no more fat in cow's milk than in mother's milk it is much more difficult to digest; the globules are larger and more fatty acids are produced. Volatile fatty acids in excess are likely to cause diarrhea with mucus. A fat-poor diet, however, lowers resistance, impairs the general nutrition, and hinders normal growth.

Carbohydrate in sufficient amount is necessary for the proper oxidation of fat, and also protects against the depletion of protein. Infants not given sufficient carbohydrate do not gain in weight, and improvement in nutrition does not occur. Finklestein emphasized this in the use of his protein milk which contains 2% fat, and he insists on sufficient carbohydrate being given. If too much sugar is given bacterial fermentation occurs, with diarrhea as a result. Some infants can absorb and store large amounts of carbohydrate, but are likely to be fat and flabby because of the loose accumulation of water in the tissues, to have a poor resistance to disease and suf-

fer precipitate loss in weight with even slight infections.

So little has been determined scientifically about whey and the whey salts that no definite opinion can be offered as to their effects on nutrition.

Another important factor in the nutrition of artificially fed infants is the buffer value of the food given. We know that cow's milk has a buffer value 3 times that of mother's milk; that unless this buffer action is neutralized either by dilution, drying, or the addition of acid, gastric digestion is delayed, no peptic digestion occurs, and the chyme entering the intestine is not sufficiently acid to properly stimulate the hormones which in turn stimulate secretion of bile and pancreatic juices. Finklestein, with protein milk, Marriott with lactic acid milk, Faber with hydrochloric acid milk, and Hess with lemon juice milk, have made important contributions to the problem of the better digestion and absorption of cow's milk.

The present view of artificial feeding does not hold any one particular constituent per se of the milk as a primary cause of nutritional disturbances; the latter is rather to be considered as due to faulty correlation of the ingredients. The proper digestion of each is dependent to a great extent on the proper balance of the others, the buffer action must be compatible with the gastric acidity, and the food must have such physical properties as favor maximum action of the gastric juices.

The simplest form of faulty nutrition is that of simple dystrophy—failure to gain in weight without diarrhea. It may be due to too much sugar, starch or fat, or to an insufficiency of fat or protein, as is likely to happen in the use of patent foods; it may be due to an anaphylaxis to cow's milk, as seen especially in infants with the exudative diathesis; or the buffer action may be at fault, as some infants will not gain until this is neutralized.

Dystrophy with diarrhea may be due to too much milk, too much concentration, or too much fat or carbohydrate. Infections may increase fermentative processes. Stagnation in the upper bowel is another factor.

The constitutional disturbances in this type of dystrophy are due largely to an interference with the carbohydrate metabolism. Food and fluids go through the intestine so rapidly that there is a lack of absorption necessary for normal tissue saturation and growth. Experiment has shown the importance of retention of a proper amount of carbohydrate to spare protein and to prevent undue loss of water and mineral salts from the body tissues. The problem in treatment here is how to prevent fermentation without too prolonged a period of lessened food intake. Breast milk in gradually increasing quantities is by far the best food; usually this is not obtainable and an artificial food must be used. The best type is one containing a large amount of casein, such as larosan, protolac, casec, protein milk of Finklestein, and, later, lactic acid milk. These foods cause an alkaline reaction in the intestine, inhibit diarrhea and allow a quicker return to a sufficient amount of carbohydrate.

A most serious nutritional problem to meet is that of marasmus or atrophy. Here there is a tissue starvation of such degree that emaciation and weakening of the functions of the body occur to an extent that the question of recovery often becomes very acute. It may follow dystrophy, be a complication of acute or chronic infections, occur in the premature, or be associated with some congenital defect. It is frequently due to starvation treatment for repeated attacks of diarrhea. These infants seem to have an inability of the tissues to hold water and to become demineralized; this occurring at expense of the proteins. When carbohydrate metabolism is interfered with the proteins are more readily broken down, and nitrogen and alkali assimilation are disturbed. We know that certain infants have this water instability more marked than others. We have seen some infants lapse into a chronic state of malnutrition ending in death; others to succumb in a short time as to an acute poisoning; and diarrhea does not always accompany these acute cases.

Certain infants with a diminished food tolerance have a tendency to atrophy. Some slight change in the diet will cause a digestive disturbance with vomiting, diarrhea, and

loss in weight out of all proportion to the cause; or, some slight mild infection may do the same thing. Feeding these patients and the treatment of infections is a more serious problem than in the case of more stable infants. Here also the diet should be breast milk if possible, and next best the protein and acid milks mentioned above. An ample fluid supply is important also—about one-fifth of the body weight in 24 hours. Where enough fluid cannot be given by mouth it must be supplied subcutaneously or intraperitoneally. The intraperitoneal injection of normal saline or Ringer's solution is safe and easy and absorption is rapid.

Alimentary intoxication is characterized by severe general toxemia, together with acute gastro-intestinal disturbances. The actual cause of this condition has not been worked out. We see a great many such cases in the Summer and at this season they are called cholera infantum. Apparently heat and humidity are exciting factors, but just how they act, whether by affecting the heat center or exciting intestinal intoxication, we do not know. The condition is very serious and any disturbance of the nervous system associated with fever, with or without diarrhea and vomiting, should raise, especially during the Summer, the question of alimentary intoxication. Diagnosis must be early if treatment is to be effective. The problem in treatment is, when to give and when to withhold food. Starvation should not exceed 24 hours, and plenty of fluid must be supplied during this time. Where vomiting interferes, fluid must be injected and often enough to supply the body needs. The important factor in feeding is to remember that relapse occurs very easily and may be quickly fatal, and also that these children are difficult to detoxicate. Death is inevitable unless fluid and food can be supplied to check the progressive intoxication and inanition.

In brief, the true nutrition disturbances of artificially fed infants depend mostly on the proper proportions of the various food ingredients, an avoidance of both over and under feeding and probably more attention to

the buffer value of cow's milk. When disturbances do occur, the prescribing of proper food for the condition must be done with extreme care, and sufficient fluids must be supplied to avoid the dangers of dehydration.

HABITS IN CHILDREN

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(Address delivered at the Mother's Meeting of the Neighborhood Center, on March 11, 1928.)

To discuss "the child" is an endless task. Its characteristics, tendencies, emotional life, development, its behavior and conduct, are all such vast chapters of study and observation that each of these elements would require a separate volume in order to present them in a more or less complete form. The child's age is the period of life when foundations must be laid for the building up of a physical, mental, and emotional structure which will direct in one way or in another the individual's relation to other members of the community in which he lives, and which will contribute to the happiness and progress or else to the misery and failure of his surroundings. It is at that age that initial direction is acquired for those forces which will guide the future man or woman in adaptations to the struggle for existence. Adaptation implies the co-operation of a great many units of the individual's mental and emotional characteristics. There must be a constant conflict among the latter with the end-result either of victory or of collapse. This will be manifested in the individual's "behavior". Behavior, therefore, is the resultant of the individual's life adaptations.

To cover in one discourse all important forces which influence behavior would necessitate considerable time. Among the large number, I have selected only a few because they present a special practical interest and a serious problem for the parents.

In discussing them I will not fail to bear in mind that I am addressing an assembly of lay persons and consequently will avoid terms, interpretations and explanations of an academic character.

In the life history of a child there are a few special features which frequently give parents considerable concern. I have reference to "special habits" which the child acquires before the school age and during school life. I shall not dwell upon a few habits observed in early infancy, such as thumb-sucking which parents frequently encourage to prevent the child from crying. I shall not arrest your attention on teeth-grinding or nail-biting which, although they have their special meaning, nevertheless are not of sufficient practical importance to elaborate upon. I will entertain you with more serious manifestations which occur in childhood beyond infancy and which may have a direct and grave influence upon formation of the child's character and future behavior.

When a child develops a desire for telling *lies*, which desire becomes eventually a strong habit, the situation is serious. This phenomenon is the result of several causative factors, chiefly of inheritance, but let us remember, also of environmental circumstances. Parents and teachers should not ignore the fact that it is important and that it is possible to arrest the development of the tendency the moment it is first noticed, because it is susceptible to treatment. The common belief that lying is, in a child, a necessary evil, is a grave error. The lie may be at first only an occasional occurrence, but, when it is permitted to repeat itself, it may gain such a strong foothold and become such a deep-seated habit, that it becomes difficult of eradication, and this pernicious habit is carried to adolescence and manhood and womanhood, affecting daily life in all its phases and leading to very serious consequences with criminality as a result. Permit me, therefore, to present to you a few hints which may be helpful in management of this abnormality. First of all, it is necessary under all circumstances and conditions, and as early as possible, to be frank and truthful with children. Should the child

commit his first or a repeated offense in telling a deliberate untruth, no undue punishment should be administered. In fact, punishment in all such cases does no good because it creates and develops fear, which by itself is the cause of lying. Thus, the child will be obsessed on one hand by fear of being punished for telling lies and on the other hand he will tell lies to avoid punishment; he will live in a vicious circle. There is another important warning to parents and teachers when they are confronted with evident children's lies; it would be very wise and prudent not to question such children too closely on the subject of their lies, for unless questioning is done skillfully and intelligently, such a procedure may lead to forced misstatements which eventually develop into deliberate and conscious deception and fraud and thus prepare the individual for a life of delinquency and all kinds of criminality. Proceeding further, I may also caution you against an unnecessary and perhaps harmful method in dealing with lies in an immature child. That is, preaching and pointing out to this undeveloped bit of humanity the evils of lying is not only useless but it may become harmful for the following reasons: First, in so doing we may exaggerate or magnify the most insignificant deviation from the truth. Second, we may suggest to the child undesirable thoughts which otherwise would perhaps, never have entered the child's mind, and, as you know, a child is extremely subject to suggestion. When parents and teachers keep on admonishing children with "you must not do this or that, you must not speak so and so", such a procedure is of itself a suggestion to the child for violating prohibited acts. On the other hand, when the child is taught and shown how to control himself on every occasion, and how to own up to a mistake or to a wrong act committed by him, when all that is done in a kindly and intelligent manner, the child's confidence will be gained and the results will be most gratifying in the struggle against repetition of falsehoods. In our attempts to correct the habit of lying in children, we must invariably hold their attention close to reality and not to fantastic and abstract ideas on truth and untruth, be-

cause overstimulation of their imagination may prevent them from discriminating between the real and the unreal.

The second abnormal habit in children which may lead to grave consequences is "stealing". We all know that a child has no sense of personal property. Not infrequently we observe children wanting to go through the pockets of others. Some of them, when they are sent on errands, do not spend as much as they are told to do and keep the balance for themselves. Some bring home things which they say were found by them on the street. These are all examples of various forms of theft. They are all serious and even dangerous habits, as they mean encroachment upon another's private property or an aggression by himself toward another person. They mean the existence in the child of a strong pernicious desire to deprive another person of things to which he is not entitled or to attack the rights of other people. They mean that if this habit is maintained during childhood, grosser delinquent acts of a more serious nature will be committed later in youth and adult age, such as pocket-picking, purse-snatching, stealing unlocked property, burglaries, highway robbery, larceny of all degrees, forgery, passing worthless checks, etc. Not infrequently we see children supplied by their overindulgent parents with more than ample pocket-money. If this habit is established, and for one reason or another the child should be deprived of further supply, he may resort to stealing in order to satisfy his taste or greed for luxuries developed by the indulgent parents.

The third form of habit in children which may lead to grave consequences is "truancy or vagrancy". It usually happens that during the day when the child cannot find desirable companions for play or other purposes, he runs away from school or from work. A poverty-stricken, or an unhappy home with bad surroundings, may lead the boy to abandon it temporarily and repeat the act so frequently that a habit becomes established. When the school teacher is unable to understand her pupils, especially the neurotic children, and handles them unreasonably either by exacting

mental work for which they are not prepared or threatening or punishing them severely, such children will look for and find opportunities to run away from school. In some such instances, we may observe children leaving their homes in the morning for school but never reaching it, and going off with undesirable "gangs" in a different direction. Restlessness, irritability, nervousness, and especially discontentment with home or school, made those children find a way whereby they could obtain satisfaction or at least relief and an outlet for their pent-up emotional forces. As a rule, these truant children spend their time in company of other delinquents and they tend to fall into further delinquency. Statistics show that truancy or vagrancy is a factor in over half of the cases of various delinquent offenses against society. Much can be done for these truant youngsters if parents are sufficiently interested to make sacrifices of their time or to try to surround the children with the desirable companionship which they crave. Since truancy represents an effort to escape from an undesirable environment, it should be looked upon with concern. Punishing a truant child will accomplish nothing and does not solve the problem.

These few examples are chosen to show how vast and complex is the problem of dealing with children. Habits, and especially bad habits, are very difficult propositions for parents. They are the most potent factors in delinquency. A wrong act once committed may be repeated more or less automatically, by force of habit, and especially when it brings pleasure or satisfaction. The more often the delinquent behavior is repeated and the more it is attended with pleasant circumstances the more established becomes the habit. Moreover, a delinquent habit may persist long after the original cause of its existence has disappeared. We may even remove the cause which leads a boy to steal, pick pockets, lie, run away from home or school, but still the delinquency may remain because of habit.

Let me now point out to you with some emphasis some of the conditions which may contribute to the formation of undesirable habits and to delinquency. I will not dwell on

bad inheritance. That instinctive and hereditary tendencies are the roots from which the physical, mental and moral life develops, is a well established fact. Not much can be accomplished in cases of children with inherent mental limitations, but personality and its component parts are also to a considerable degree molded by environmental conditions. It is on the latter that our efforts must be concentrated, as they are amenable to improvement. Among the environmental elements "home" is the most potent. In considering home conditions the following may contribute to delinquency:

(1) Unsanitary features. These undermine the child's physical health, and indirectly his mental health, and consequently reduce his vitality and his power to control behavior.

(2) Crowded homes. There, children frequently witness scenes between their elders which give their immature mind suggestions for delinquency.

(3) Material poverty. This may lead to lying and stealing. With poverty are closely associated ill health, overcrowding, neglect, ill-tempered parents, and so forth. Thefts of all kinds and hold-ups result from longing for food, clothing, shelter; 55% of young delinquents in London come from homes that are below the poverty line.

(4) Material prosperity. In some cases, excess in material things, permitted by over-indulgent parents, leads to a lack of appreciation of values and poor self-discipline, with the result that the child becomes incorrigible and commits offenses ranging from petty larceny to setting fires, burglary, and even to murder.

(5) Disrupted homes. Either through death of parents or divorce, the child loses necessary examples, guidance, discipline or affection, so essential to his development. It has been observed that 79% of delinquencies occur where the home was disrupted during childhood of the individual.

(6) Mental abnormalities of parents. Bad habits of parents, such as drunkenness, immorality or criminal tendencies, are bound to have a pernicious effect on the children through the

innate tendency for imitation, misguided teaching, disgust, antipathy against the home, shame, a feeling of degradation, or loss of respect for parents.

(7) Ill-treatment. Abuse by guardians, foster-parents or step-parents leads the child gradually to truancy or vagrancy; he then gets in with gangs and drifts into delinquency. In all such cases a feeling of resentment develops in children against the abuser. Because of this feeling, their influence by work or example becomes insignificant. The child may become stubborn, and this state will keep him from being benefitted by the small amount of parental discipline, and he becomes a slave to his instincts and emotions.

(8) Unhappy relationship. When this exists between father and mother it may be a cause of the child's unhappiness and, if continued, will develop undesirable tendencies in him.

(9) Misdirected discipline. This is a frequent cause of delinquency. Over-indulgence, or else over-restriction, on the part of parents makes the child react in an abnormal way. Desire for forbidden things becomes great and he will seek satisfaction outside of home, in a delinquent manner. Forbidding things in an unreasonable and inconsistent manner will react on the child so that he will oppose his parents in everything and it will make more intense his desire to do forbidden things until it gets the best of him. If severity and punishment are practiced, the child will seek satisfaction outside, with a bad effect on his behavior. Favoritism and injustice are promptly felt and resented by children. They lose respect for parents and seek compensation in abnormal ways. Nagging and creating fear in children are dangerous for their effect on physical and mental development. The fear fixes the undesirable tendency in his mind and he attempts to escape from it through some abnormal act.

All these factors must be borne in mind when we are confronted with cases of bad habits leading to delinquencies. No individual case can be treated in a satisfactory manner without adequate knowledge of all causes

of the trouble. Facts must be obtained from many sources.

In concluding the few thoughts presented here, I wish to emphasize the fact that all I have described covers only a small part of all the causes of delinquency. I have selected but a few to indicate how serious the problem of the child is. Among all the factors that enter into consideration when the personality and behavior of a child are observed and studied, *parents and home* are the most potent elements which have an influence upon and shape the destiny of the future man and woman. The home must be considered the workshop in which the personality of the child is being developed. The character, attitude and mutual relationship of parents and the child lay the foundation of that mental atmosphere in which the child lives, grows, and imitates, undergoes suggestions, forms habits, and prepares himself for future activities to become a member of the community and in his turn to become a parent, when he will play his part in developing the personalities of the next generation. The child deprived of sympathy and affectionate attention at home misses the most important elements in preparation for mental and emotional growth. Encouragement to effort and to confidence in himself, relief from emotional strain, sympathy that helps a child bear bravely gross and small disappointments, development of affectionate response in cases of unhappy incidents in the life of father and mother, and of the outside world, all these elements are highly essential in the development of a normal child. Should they be lacking in the home, the child's behavior will suffer irreparably. The lack of joy in home, or the want of emotional comfort, will lead the child to abnormal tendencies and undesirable habits such as were mentioned above and turn the child delinquent with all the unhappy consequences to himself and to the community in which he lives. Statistics show that home is overwhelmingly more influential than the street in producing delinquency. Home environment in all its details presents the best field for preventive work.

THE HYPOPHYSEAL GLAND

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The hypophysis (pituitary body) is a neuroglandular organ, its glandular portion being of the ductless, endocrine or internal secretion type. It is a small reddish-gray body, resting in the hypophyseal fossa. In man it measures about 12 mm. in the transverse, 7 mm. in the sagittal, and 5 mm. in vertical diameter. The hypophysis was known to the early anatomists as the pituitary gland (Vesal, 1553), and was supposed to function as an excretory organ in the elimination of mucus (pituita) from the brain by way of the nose.

The gland consists of an anterior and a posterior lobe, which differ from one another in their mode of development and in structure. The anterior lobe, the larger, is somewhat kidney-shaped, the concavity being directed backward and embracing the posterior lobe. A number of authors state that it consists of a pars anterior and a pars intermedia, separated from each other by a narrow cleft, the remnant of a pouch or diverticulum. More will be said a little later about this part. The pars anterior is extremely vascular and consists of epithelial cells of varying size and shape, arranged in cord-like trabeculae or alveoli and separated by large, thin-walled blood-vessels.

The pars intermedia is a thin lamina closely applied to the body and neck of the posterior lobe and extending onto the neighboring parts of the brain; it contains few blood-vessels and consists of finely granular cells between which are small masses of colloid material. The pars intermedia, in spite of the fact that it arises in common with the pars anterior from the ectoderm of the primitive buccal cavity, is often considered a part of the posterior lobe which arises from the floor of the

third ventricle of the brain. Although of nerve tissue origin, the posterior lobe contains no nerve cells or fibers. It consists of neuroglia cells and fibers and is invaded by columns which grow into it from the pars intermedia, while imbedded in it are large quantities of colloid substance histologically similar to that found in the thyroid gland. In certain of the lower vertebrates, e. g. fishes, nervous structures are present and the lobe is of large size.

From the pars intermedia, a substance, no doubt an internal secretion, is obtained which causes constriction of blood-vessels with rise of arterial blood pressure. This substance seems to have a stimulating effect on most of the smooth muscles, acting directly upon the muscle and causing contraction. It also increases the flow of urine; of the mammary gland secretion when in functional activity; and of the cerebrospinal fluid. Extracts of this lobe also influence the general metabolism of the carbohydrates by accelerating the process of glycogenolysis of the liver. Other authors, on the contrary, plainly state that the substance which produces rise of blood pressure can be extracted only from the posterior lobe. Some state that a second injection of the same substance is followed by a fall in pressure. Certain experimenters have reported that a substance capable of causing a fall in blood pressure may be obtained from the anterior lobe of the hypophysis.

Independent of the action of the extracts upon the heart and blood-vessels, is the action of pituitrin upon the urinary bladder and the uterus. It stimulates the muscles of the bladder to a degree, but it stimulates irritability of the pelvic visceral nerves very greatly. Sensibility of the inhibitory sympathetic nerve, that is, the hypogastric nerve, remains unaltered. Maximal contractions of the uterus are produced by pituitrin but apparently not uniformly. The uterine nerves from the hypogastric plexus are seemingly made more sensitive, while sensibility of the inhibitory sympathetic, the hypogastric, is unaltered.

It must be admitted that in view of the contradictory clinical and experimental data there is yet much to be learned of the func-

tion of the hypophyseal gland. What we apparently have learned with a reasonable degree of definiteness is the fact that presence of the gland is essential to the maintenance of life.

The posterior lobe is developed as an evagination of that part of the floor of the third ventricle which goes to form a portion of the floor of the fore-brain. The anterior lobe is derived from the ectoderm of the stomodeum. About the fourth week there appears a pouch-like diverticulum, pouch of Rathke, which is the rudiment of the anterior lobe. It extends upward in front of the cephalic end of the notochord and the remnant of the buccopharyngeal membrane and comes into contact with the undersurface of the fore-brain, is then constricted off to form a closed vesicle, and remains for a time connected to the ectoderm of the stomodeum by a solid cord of cells. Masses of epithelial cells form on either side and in the front wall of the vesicle, and there is growth between these of a stroma from the mesoderm. The upwardly directed hypophyseal involution becomes applied to the anterolateral aspect of a downwardly directed diverticulum from the base of the fore-brain; which constitutes the future infundibulum in the floor of the third ventricle, while its inferior extremity becomes modified to form the posterior lobe of the hypophysis. In some of the lower animals the posterior lobe contains nerve cells and nerve fibers, but in men and the higher vertebrates these are largely replaced by connective tissue.

A craniopharyngeal canal is sometimes found extending from the anterior part of the fossa hypophyseos of the sphenoid bone to the under surface of the skull; and marks the original position of Rathke's pouch; while at the junction of the septum of the nose with the palate traces of the stomodeal end are occasionally present (Frazer, quoted from Gray).

The anterior lobe, histologically, may be divided into cells which stain well and cells which do not; those which do take the stain well being called chromophile cells, and those which do not being termed chromophobe cells. The chromophile cells are further subdivided

into cells which take an acid stain, and are known as eosinophile cells, and those which take a basic stain and are known as basophile cells. The eosinophile cells are spheroid or polyhedral in shape, with a nearly homogeneous protoplasm full of fine granules that stain strongly with eosin. The nuclei are small and rounded, stain strongly with hematoxylin, and are placed in the center of the cell. The basophile cells are also large, with well-defined borders, and stain a dark blue with hematoxylin; the protoplasm contains coarse granules, and the nuclei are concentrically placed and frequently contain vacuoles. The second main variety of these cells are the chromophobes, which present ill-defined borders and have protoplasm that does not fix or stain well; their nuclei, however, are large, either round or irregular in shape, and possess a net work which stains deeply with the nuclear stains. During pregnancy the chromophobe cells undergo some changes; their nuclei appear large, light and irregular; plasma becomes more abundant and distinctly granular; the granules take the eosin stain well. Erdheim and Stumme termed these "pregnancy cells". Another cell type found in the gland, particularly about the stalk, is the squamous cell.

The finely balanced play of all these cellular elements makes up the normal physiologic function of the anterior lobe of the hypophyseal body. On the other hand, any one of the histologic cellular elements may undergo hyperplastic development and produce a tumor with clinical characteristics of the particular cell of which it is composed. Thus, it is quite possible to have an eosinophile cell tumor, a basophile cell tumor, a principle cell tumor, a pregnancy cell tumor, or a squamous cell tumor. Each one of these particular cell type tumors is in reality an hypophyseal tissue tumor, but with this distinction—it is not a total but rather a partial pituitary tissue tumor. It appears that the tumor formed of any one of these particular cell types is capable of producing a characteristic effect upon the human economy. Thus, the clinical picture in consequence of an eosinophile cell tumor is entirely different from the picture resulting from the

influences of a squamous cell, or a principle cell, or even a basophile cell tumor. It is very important that this distinction be held in mind, and it will be again stressed as pathology of the gland is considered.

Minkowski, Marie, Broca and others, in their postmortem studies of acromegalic patients found a large tumor in the sella turcica and changes in the sella itself. The acromegalics showed not only changes in the acral parts, which were frequently very much enlarged, but often very marked changes in other parts of the body, particularly in those organs which go to make up the endocrine system.

Minkowski vouchsafed an opinion that tumors of the hypophyseal gland were in all probability responsible for acromegalic changes. Marie, however, seemed to waver in his deductions, in spite of the fact that it was he who first issued the remarkable studies which added so greatly to our store of knowledge of this affliction. He could not quite bring himself to the point where he could accept as fact that tumors of the hypophysis were the primary cause of the evident clinical changes observed in acromegalics, because certain definite criteria were absent. There were not always present the same changes which define this disease. While clinical syndromes and histopathologic findings may vary to a limited extent in a given disease, the range of variation cannot well extend beyond a certain maximum and still be considered as part of the disease entity. There were reports of clinical acromegaly which did not disclose changes in the sella turcica nor present a tumor there. There existed considerable hesitancy in accepting the tumor idea of the hypophyseal gland as being the etiologic factor of this ailment. As a matter of fact, normal pituitary glandular tissue and no disturbances in the Turkish saddle were found in a patient who, clinically, presented a great many of the symptoms generally accepted as constituting the acromegalic syndrome. There was considerable hesitancy and wavering among the medical investigators as to just how to put all of the recorded facts together. Suddenly, a new light was shed upon the controversy.

About 1905, a shoemaker, aged 43 years,

came from Bohemia to the ear clinic in Vienna suffering from a chronic otitis. The history disclosed a chronic otitis media of many years standing, with evidences of an intracranial complication. The examining physician observed that in addition to the ear and possible cerebral disturbances, the patient presented enlarged hands, feet, nose and chin, and thickened lips and tongue. The signs were unmistakably acromegalic. The doctor's inquisitiveness being aroused, he further asked the patient whether he had always had such enlarged acral parts. The reply was in the negative. The patient did, however, observe that these particular parts began a new and second growth approximately 12 to 15 years previously. The neurologist and internist called into consultation confirmed the probable diagnosis of acromegaly. A few days later the patient died of cerebral meningitis of otitic origin; not having been treated surgically.

The postmortem, which was done by Ghon, and studies afterwards made by Erdheim, disclosed the usual meningeal pathology as being the direct cause of death. Nothing was found in the sella turcica to account for the acral enlargements. The pituitary gland was normal, macroscopically and microscopically. If ever there existed a good and sufficient reason to doubt relationship between the hypophyseal gland dysfunction and acromegaly, here was surely an illustration par excellence, but, while subjecting the anatomic parts to an unusually close scrutiny, Erdheim came upon a large foreign mass within the central part of the sphenoid bone, a mass which filled practically the entire sphenoidal sinus, pushing upward until there was an erosion of the floor of the sella. Histologic examination of the tumor mass proved it to be an hypophyseal glandular tissue tumor. This growth was composed of eosinophile cells, and as this is but one of the numerous cell types which go to make up the anterior lobe this tumor was a partial and not a total anterior lobe tumor. It is important that this differential fact be kept in mind, for it is only because of this fact that certain deductions can be made relative to particular groups of clinical symptoms.

The whole observation is quite absorbing,

with no little interest being attached to the question: how did the tumor, being of pituitary glandular tissue, get into just that particular location, how did it get into the body of the sphenoid bone? After this question is answered, some comment anent certain clinical symptoms which have become very closely allied to disease of the pituitary gland, should also be given consideration.

In order to intelligently answer the question of how the tumor got into the sphenoid bone, it is necessary to look back to its origin and then follow to its final anatomic resting place.

At the outset of this paper it was pointed out that the anterior lobe is developed by protrusion of an ectodermal pouch from the roof of the pharynx, and is made up of epithelium derived from the buccal cavity. This was definitely settled by the embryologist, H. Rathke, in 1838. From the roof of the pharynx, this embryonic organ passes upward through the embryonic opening which afterward becomes known as the craniopharyngeal canal, formed in what at a later period becomes the sphenoid bone. In the entire passage, from the pharyngeal roof to the sella turcica, the anterior lobe leaves "rests".

Killian, in 1888, made note of a pharyngeal hypophysis. Civalleri, at an anatomic congress held at Marseilles in 1908, under the title of "L'hypophyse pharyngienne chez l'homme", called attention to the pharyngeal hypophysis. Haberfeld, May 4, 1909, Vienna, reported an exhaustive study of the pharyngeal hypophysis, his conclusions being summed up as follows: That in the roof of the pharynx there was hypophyseal tissue. That it was a constant organ of the human body. That it was found in the fetus, in the new-born, and persisted up to old age. In addition, he found germinal hypophyseal cells between the pituitary tissue and the bony part of the cranium; within the canalis craniopharyngeus; in the uppermost end of the canal; further, between the bony sella turcica and the hypophyseal gland; and still further, in the cranial vault attached to the hypophyseal stalk. In the case of an anencephalus he found that the entire canalis craniopharyngeus, which remained

persistent up to the intrasellar pituitary gland, was literally sowed with hypophyseal tissue germinal cells. Many authors state that up to 10% of all new-borns show a persistent craniopharyngeal canal.

These germinal cells or hypophyseal rests, as Erdheim calls them, extending from the roof of the pharynx to the suprasellar stalk, can undergo a hyperplastic development. When an hyperplastic growth does occur and the mass consists of eosinophile cells an overgrowth of tissue takes place. The secretion given off by these cells is, in all probability, poured directly into the blood stream.

The early observation that only a hypophyseal gland tumor situated in the sella turcica can produce acromegaly, does not stand today as entirely correct. Erdheim's findings in the case where the tumor was located in the sphenoid bone point to the possibility that in acromegalics, where no hypertrophy of the intrasellar hypophyseal gland could be found, there may yet have been hypophyseal cell tumor somewhere else. Attention is directed to the fact that in this particular case, as well as in some subsequent cases to follow, the growth is not composed of all the cellular elements of which the normal gland is formed, but rather is built up of a single cellular element, only one of the cell types of which the normal glandular tissue is made up. Therefore, while acromegaly is, in truth, a hyperpituitarism, it is not a hyperpituitarism totalis, but a hyperpituitarism partialis.

One of the most difficult tasks with which investigators have been confronted during studies of acromegaly and the hypophyseal gland tumor has been to recognize which part of the clinical picture belonged to direct action of the tumor, and which part to disturbance of normal function of neighboring parts. The usual seat of pituitary growths is in or about the sella turcica and they are usually adenomas. Growths in other parts, for instance in the sphenoidal bone body, are rare. Clinical syndromes produced directly by a pituitary cell tumor and those produced by a lesion of the cerebral base were so intermingled and interrelated that problems of the most difficult nature had to be faced when attempts

were made to differentiate between those of hypophyseal and those of cerebral origin.

In the case of the shoemaker, we are offered a study of a tumor, enclosed within a bony capsule, far removed from vital organs. Whatever abnormalities occurred must be attributed to this tumor. The acromegalic changes that were observed, both clinically and pathologically, must be attributed to the collection of eosinophile cells. One is justified, at least in this case, in assuming that acromegaly is a direct result of an increased secretion of eosinophile cells which are a constituent part of the normal hypophyseal glandular tissue. Since the eosinophile cells are only a part of the glandular structure, it must be said, then, that acromegaly is the result of a hyperpituitarism partialis. Eosinophile cells appear to have a direct influence upon tissue growth. When an increase of these cells occurs, with a consequent increase of secretion taking place after ossification of the epiphysis is completed, acromegalic changes result. If, however, the disease begins before ossification of the epiphysis is completed gigantism of the Launois type results. In the first class, which sometimes is called the "typus Marie", if disease begins after normal growth of body has ceased and the epiphyses are closed (after the second decennium), then important skeletal and tissue changes occur but without the high increase in size of the individual. In the second instance, the "typus Launois", the disease occurring before the epiphyses are closed, high increase in size of the individual occurs—Cushing reported a case of a 15 yr. old male, who attained a height of 8 ft. 3 in. and a weight of 275 lb.—with terminal stages of enlargement of facies, hands and feet, and very frequently with much adiposity.

It has already been mentioned that Habersfeld and Erdheim noted that hypophyseal tissue rests or hypophyseal germinal cells may be lodged in the sella itself, separate and distinct from the normal gland. These rests may undergo hyperplastic changes. If these growths be composed of eosinophile cells, acromegalic enlargements or gigantism can be the consequence. These tumors are mostly

adenomas, of very slow growth usually, and the disease may stretch into many years, 30, 40 or even 50 years before the patient finally succumbs. It is because of this chronicity that complete clinical and pathologic studies have been rare; the patients seeking relief from their varied ailments, especially the terrific, persistent headaches, going from doctor to doctor, from clinic to clinic, and no clinic or doctor having them long enough under observation to make a complete study of data.

Tumors which have their origin in the hypophyseal rests in the cells continue to develop, and as they grow encroach upon the normal gland, and interfere with its function. The foreign mass, as it expands, presses upon the normal gland, bringing about an atrophy of its acini with consequent lowered normal secretion, a condition of hypopituitarism totalis.

Benda was one of the first to call attention to the eosinophile as being the cell which possibly secretes the hormone that excites the overgrowth observed in acromegaly and gigantism, and subsequent studies have gone far to support his view.

In the wake of these statements, another pertinent query presents itself; namely, are hypophyseal rests always eosinophile cells? Not at all. The rests may consist of any of the other cells and when rests consisting of squamous cells, basophilic cells, or even pregnancy cells, develop into large masses, they too cause no little amount of inconvenience, apparently not because of the secretion they pour into the blood stream but rather because of the accident of location. So far as we know today, none of the cells other than the eosinophiles produce an internal secretion. Some day we may learn of a secretion formed by some of the other cells. The pregnancy cell is perhaps an exception; to this cell we will refer later.

One of the principal clinical manifestations due to a decreased pituitary gland function, when occurring in a growing individual, is interference with development of practically all of the other organs. If interference with the glandular function is very marked, there occurs almost an entire cessation of

growth. It is perhaps not essential that the disturbing factor be a tumor of hypophyseal tissue; apparently any other interference with its function will exert the same effect. It is interference with normal function of the gland, so that there occurs a hypofunction, or a decreased secretion of hormone, which is at the bottom of the trouble. The writer, not long ago, saw a male 23 years old whose size and measurements were practically those of a child 8 years of age. The history disclosed the fact that when about 7 or 8 years old the patient suffered an accidental revolver shot wound, the bullet entering the temple. X-rays, even at this late date, showed evidence of a foreign body located in the region of the hypophyseal gland. The foreign substance, which evidently was part of the exploded bullet, interfered with normal secretion of the pituitary gland to the point of having brought the growth of the individual to almost a standstill. This, apparently, is unquestioned evidence that bodies other than tumors, when pressing upon the normal hypophyseal gland will disturb and lower its function. Another important clinical feature gleaned from this case is the fact that interference with the normal processes of the hypophyseal gland, in a growing individual, so that a "hypopituitarism totalis" is the immediate result, will cause material interference with growth. The interference with bodily growth may be partial or may be almost total, depending upon the degree of hindrance forced upon the normal gland and how badly the discharge of its normal functions are blocked. The epiphyses in these cases remain open long after the date when normally they should be closed, the genitals remain infantile, secondary sexual organs are undeveloped with sacral and pubic hypotrichosis, etc.

Arnold Paltauf was the first to make an exhaustive study of a male who at the time of death was close to middle age, and who had supposedly been suffering from a pituitary gland disturbance. This individual made his living as a member of various side-shows, and otherwise presenting himself where Lilliputians performed. His intelligence was always good. For years his was a familiar face

in the side-shows on "The Prater" in Vienna, but he evidenced a slow but continued growth and several years before death became too large to serve as an attractive Lilliputian and was, therefore, discharged; he had, however, never attained a growth sufficient to be normal. His sexual organs remained immature, with hypotrichosis, no hair about his chin, and voice that was childish. Postmortem disclosed a deepened and widened sella filled with a mass which did not look like pituitary gland tissue. Paltauf did not intimate his opinion of the etiology of this mass, but said that the tumor, which had occurred early in life, had pressed upon the normal hypophyseal gland and interfered with function. The secretion, however, was apparently not only sufficient to sustain life but to influence a slight degree of growth. The epiphyses having remained open, growth continued long after the usual time. This man, known as the Paltauf dwarf, is accepted as the classical representation of the *Nanosoma pituitaria infantilis*. Erdheim states definitely that the etiology of the Paltauf dwarf can be ascribed to a tumor developed from an embryonic rest which the anterior lobe deposited within the sella at the time of its own nesting there. This rest consisted of some cell type other than the eosinophilic. Erdheim based his supposition upon 3 of his well studied cases: in one he had found an hypophyseal passage tumor which almost completely destroyed the true hypophyseal glandular tissue; the other 2 were basophile cell tumors. In the Paltauf dwarf we are faced with a condition in which the true hypophyseal glandular tissue suffered an interference with its normal play of function in the early years of life; the secretion being insufficient for normal bodily needs, growth and development suffered marked retardation.

Jutaka Kon reported a 27 yr. old male, 127 cm. in height, with no hair in the axillary or genital regions. Intelligence was normal. An infundibular tumor, which he called a teratoma, was found at postmortem examination. This tumor compressed the hypophyseal gland markedly. The testicles corresponded in size to those of a 3 yr. old child; penis was very small; thyroid gland hypoplastic. Erdheim

does not accept this as a teratoma, but calls it rather a hypophyseal passage tumor (*Hypophysengang tumor*). Sternberg's comment on the testicles may be summed up as follows: in cases of hypopituitary dwarfs the testicles may remain infantile, i. e. they do not undergo any development at all or may, in case some development had taken place, undergo an atrophy.

Nazari reported a 20 yr. old individual, 125 cm. in height, who had good intelligence. In the first years of his life development seems to have been quite normal; then, about the sixth or seventh year, there was cessation of further growth. Postmortem disclosed tuberculous meningitis and chronic miliary tuberculosis of the lungs; in addition, a large cyst of the hypophyseal gland substance could be observed, and also hypoplasia of the thyroid gland and the testicles. In this case, the histologic appearance of the testes would suggest more a hypoplasia than an atrophy.

Simmonds reported on a 21 yr. old man; 110 cm. high and proportionately built dwarf; good intelligence; open epiphyses; beard, axillary and pubic hair entirely missing; external genitalia corresponding to that of an infant; testicles the size of a pea, weighing 0.9 and 1.2 gm.; thymus gland weighed 2.5 gm.; adrenals particularly small; thyroid weighed 2 gm. A very interesting feature of this case is the fact that histologically the thymus gland, adrenals, pancreas, liver and spleen were all normal. The hypophyseal gland was very small, weighing only 0.2 gm. Macroscopically, there was no anterior lobe to be seen. The posterior lobe had the usual form and size. The posterior lobe was normal, but in front of it there were some smaller and some larger cysts. Of the anterior lobe there was only a small fragment to be found. The testicles showed hypoplastic structure. Simmonds considered the pathologic findings in this case to result from an embolic process suffered during the early days of life. According to Hoffmann-Kolisko the measurement bespeaks the size of a 6 yr. old child. We have got to assume that the disturbance which prevented normal functioning of the gland had already set in long before the per-

son had reached the age of 6. At first, there was probably a gradual retardation of normal growth and then a practically complete cessation. A strict analysis of the case would really place the glandular functional disruption at a very early age.

This patient, like all dwarfs coming to the attention of the writer, had persistent epiphyseal lines up to the time of death; ossification in the synchondrosis had not taken place. The case which Priesel described marks the one exception; Priesel particularly remarked that epiphyseal ossification was completed and he recognized this as a deviation from the usual.

The dwarf that Priesel described, and whom we have referred to as examined by Paltauf, showed extraordinary features. He was born in Vienna, March 8, 1826, and died January, 1917, having apparently enjoyed good health up to the time he entered the Old People's Home. As a child he seemingly was normal in stature, but growth ceased at the age of 15 years; in reality he probably ceased growing at an earlier period but at 15 he became aware that he was not growing any more.

He was accepted into the Old People's Home, of Vienna, at the age of 60, where his intelligence earned him a position as chief of a part of the untrained male nursing department, which he held for over 10 years with satisfactory results to the management of the institution. His voice was squeaky and high pitched. In 1907 he suffered an attack of erysipelas of the right ear and head, which healed without giving any serious trouble. In June, 1916, he suffered a passing edema. In October, 1916, he had an attack of dyspnea and both legs became badly swollen. He then became permanently confined to his bed. Very soon difficulty in urination set in, but there was no history of polyuria. Weakness increased so that the patient slept almost continuously, and he died January, 1917.

A grand nephew of the patient, who was also at the home in 1917, stated that the mother died at the age of 81 years. The father's age at time of death was unknown. The dwarf had 3 brothers: 1 died at the age of 47; the second at the age of 52; the third

at the age of 47 years. The father, mother and brothers were all normal in size.

At time of death the dwarf's stature was proportionate, gracile, musculature somewhat weak. Fat distribution, still enough to evidence that there had been a rich quantity present. The panniculus about the abdomen and mons veneris was quite generous in proportion. From either side of the mons veneris there were large folds, formed of fat and skin, drawing downward to the perineum and passing directly into the scrotum. The penis was 5 cm. long. No testicles could be felt in the scrotum, but higher up in the folds of fat small bodies about the size of hazel nuts could be felt. The skull, a mesocephalic, was 51 cm. in horizontal measurement and from 3 to 7 mm. in thickness. The brain was normal in configuration and weighed 1050 gm. When the base of the brain was cut, to be removed from the skull, it was seen that the hypophyseal stalk, at the place of insertion into the gland, was very thin, measuring only 0.5 mm. Toward the third ventricle the stalk became considerably thicker, measuring at its attachment with the brain 5 mm. in thickness. The thyroid gland weighed 15.9 gm. The left lobe measured $4.5 \times 2 \times 2$ cm.; the right lobe $4 \times 1.5 \times 2$ cm. The maximum thickness of the parenchyma was 14 mm. The isthmus was 12 mm. long and 4 mm. thick. Parathyroids: the right upper body measured $8 \times 3 \times 1$ mm.; the right lower, $3 \times 1 \times 1$ mm.; left upper, $14 \times 10 \times 4.5$ mm. The left lower epithelial body was only a small mass of fat-like substance. The right adrenal $4 \times 2 \times 0.6$ mm., weighed 2.65 gm.; the left adrenal $4.5 \times 1.7 \times 0.5$ mm., weighed 2.4 gm. The prostata 2×3 cm. showed on cross section areas of glandular tissue that could be recognized macroscopically. The vesiculae seminales $30 \times 10 \times 4$ mm. Cross section showed macroscopically, no lumen. The testicles were found in the normal cavum vaginale, covered by a normal-appearing bluish white albuginea. The right measured $20 \times 15 \times 10$ mm., the left $19 \times 16 \times 11$ mm. On cross section a large quantity of connective tissue could be seen. A cross section of the penis about 2 cm. from the sulcus coronarius glandis was 18 mm. thick and 14 mm.

broad. The corpora cavernosa penis was 4 mm. and the urethra 7 mm. wide.

All other organs of the body were proportionate in parenchyma and connective tissue to the size of the body, except the hypophyseal gland, which was striking in its exception. That portion of the glandular tissue developed from the floor of the third ventricle—the neurohypophysis—was found suprasellar instead of within the saddle. The neural part of the gland was found behind the chiasm opticorum, attached closely to the infundibulum, hugging the base of the brain. On the anterior of the neurohypophysis just behind the chiasm was a platelet of orohypophyseal tissue, binding the suprasellar to the intersellar substance. The sella turcica was enlarged in all directions; walls thinner than normal. In the center of the diaphragm was a large opening through which the stalk passed. The stalk being very thin did not fill the entire opening, as result of which there existed a small communicating aperture between the sella and base of the brain. In the sella turcica was a thin tissue enclosing some fluid, debris, and a small quantity of glandular substance. Histologically, the glandular tissue consisted mainly of principle cells, although there were also some eosinophile and basophile cells. After removal of the soft parts, a small aperture on the bony floor of the sella was exposed, where introduction of a sound led into a larger space within the sphenoid bone. The entire cleft leading from the sphenoid bone to the floor of the Turkish saddle was the remains of the embryologic canalis craneopharyngeus. Within the entire canal embryologic rests of the orohypophyseal tissue, in various stages of development and degeneration, could be seen. A good deal of the glandular tissue was also cystic. A small strand of pituitary substance passed between the sella and the sphenoid bone through the opening. There existed also a communication between the cyst in the sella and the cystic particles found in the body of the sphenoid bone. A persistent craniopharyngeal canal was found in this case. The neurohypophyseal body, not in its usual place, was normal in size and form. It was the anterior lobe of the gland

that had undergone degeneration. The various changes observed clinically may be attributed to the loss of function of the anterior lobe.

In summing up the pathologic findings of this dwarf, the striking features particularly in evidence are: (1) Small size of the thyroid gland and the adrenals; (2) remarkable size of the epithelial bodies; (3) small genitals; (4) apparent early developed cerebral adipositas; (5) peculiarity of the glandula hypophysis; (6) persistence of the canalis craniopharyngeus; (7) remnants of the embryologic oroglandular cells within the canal; (8) embryologic development and degeneration.

In the consideration of dwarfs it is very important not to confuse the various types. The etiology is not the same for all. The hypophyseal dwarf, the subject of our present thesis, is a proportionately built, gracile and intelligent individual. He is the "Nanosomia" of Virchow, and is brought about by hypofunction of the hypophyseal gland. The disturbance occurs in early childhood. The condition also represents the Nanosomia pituitaria infantilis of Erdheim.

There are also the unproportionate dwarfs belonging to the rachitic, cretinitic, and chondrodystrophic family. These must not be confused with the hypophyseal midget, and since they are beside our present discussion, they must be dismissed from this paper.

Hanseman called attention to what he termed Nanosomia primordialis, which according to Schwalbe occurs through a "vitium primae formationis of the unfructified ovum". Hanseman, in addition, is of the opinion that the condition can occur through a defect in the fructified ovum, or through a developmental defect in the embryo.

The Nanosomia primordialis is an individual that comes into the world already small, i. e. at birth it is smaller than the average, undergoes the usual normal development and growth, the epiphyses closing at the proper time and cessation of growth takes place at the usual period. The genital organs undergo the average development with normal function, and the individual's physical size remains

smaller than the average person. The Nanosomia infantilis are born normal in size, in fact it is seldom that one is smaller than the average at birth. At one period or another growth suddenly ceases. Although the epiphyses remain open, growth taking place to a very late date, the growth is so very slow that the individual always remains under size, as was noted in the Paltauf dwarf. In many instances, if growth does take place it is practically imperceptible. The genital organs, either do not undergo development at all, or if growth had taken place, atrophy sets in. The voice remains childish. The growth of hair on the chin, sacral region, armpits, is either entirely missing or is very sparse. The intelligence, while good, usually bespeaks that of a child 2 or 3 years above the corresponding size. Genuine dwarfs, if they are not at the same time microcephalics, are never idiotic.

When the anterior lobe reaches its seat, it sends a slight prolongation upward upon its stem or stalk and still further upon the infundibular process. This prolongation becomes slightly thickened. It is usually composed of the same cellular elements as the anterior lobe. Experience, however, informs us that squamous cells are the usual types found here. These cells may undergo hyperplastic growth. If benign, the growth is invariably very slow and prolonged. It makes itself first felt in childhood. As it increases in size, it exerts pressure upon the hypophyseal gland proper, shutting off normal function. Interference with normal function of the gland is of a slow nature, because these tumors are themselves slow of growth. Although the tumors occur usually in childhood, the child undergoes its greatest growth before the tumor becomes large enough to markedly interfere with normal function of the hypophyseal gland which in turn interferes with further growth of the patient. These tumors have their origin in tissue above the sella, and are therefore termed suprasellar tumors. Individuals suffering from suprasellar tumors, while usually smaller than the average person in stature, are never so small as to be called a dwarf. Their sexual development is practically nil, and if their genitals

had undergone some development before the foreign mass had become large enough to press upon the pituitary gland with some degree of force, an atrophy sets in. Adiposity, an unequal and singular distribution of fat, is also an accompanying symptom. The male assumes a more or less feminine type. This disease, known as dystrophia adiposo genitalis, was first described by Froehlich and is frequently referred to as Froehlich's disease. In addition to suffering from a hypogenitalism, adipositas, the individual also suffers from severe headaches, visual and trophic disturbances, and frequently from diabetes insipidus or perhaps mellitus. This suprasellar tumor causing these varied clinical symptoms is made up of squamous cells, developed from the squamous cells embryologically deposited by the anterior lobe about its stalk.

Froehlich, in his original paper, said that the entire symptom complex was a result of the hypophyseal gland lesion. Subsequent observations do not bear out all of Froehlich's assumptions, especially his hypothesis relating to the adipositas which he attributed to a lesion of the pituitary gland. The same type adiposity, as seen in his disease, has been observed in tumors of the base of the brain, in basal meningitis, basal fractures, hydrocephalus internus, accompanied by an intact hypophyseal gland tissue. In hypophyseal tumors, when there did not exist pressure upon the base of the brain, adiposity was not present.

Some little time ago Erdheim expressed himself to the effect that the hypophyseal tumor will only produce adiposity when the growth at the same time produces a lesion of the base of the brain, and that part which is situated at or near the tuber cinereum. Certain authors have raised the presumption that the tuber cinereum is the carbohydrate center and that lesions in that organ are accompanied by disturbance in the carbohydrate metabolism. We cannot, as yet, place our finger upon the exact spot where the carbohydrate center is located. However, many highly recognized investigators lean very strongly to acceptance of the tuber cinereum, very close to the corpora mammillaria, as the

center, and believe an injury there will be followed by disturbance in metabolism.

Three distinct symptoms have been given due consideration; interference with growth, hypogenitalism and adiposity. These may justly be called cardinal symptoms in a suprasellar tumor, but there are other symptoms which must be accounted for because invariably present; namely, headaches, visual disturbances, apathy, etc.

Before proceeding to discuss these clinical manifestations, it is necessary to describe briefly the anatomy surrounding the sella turcica. Situated one on each side of the body of the sphenoid bone are the cavernous sinuses with the carotid arteries and the ocular nerves. Immediately in front are the sulcus chiasmaticus and the tuberculum sellae. Behind, is the dorsum sellae. Upon the sulcus chiasmaticus and the tuberculum sellae rests the optic chiasm, while upon the dorsum sellae is the pons. Extending upward, forward and lateralward from the anterior border of the pons are the cerebral peduncles. Immediately above the sella is the base of the third ventricle. The hypophyseal gland, which is lodged within the sella turcica, is attached to the third ventricle by the short hypophyseal stalk and infundibulum. The internal carotid arteries, which emerge on the side of the body of the sphenoid bone, soon divide into the anterior and middle cerebral arteries. The 2 anterior cerebral arteries are united at the base of the brain, just in front of the optic chiasm, by the anterior communicating artery. The 2 anterior cerebral with the anterior communicating form the anterior portion of the circle of Willis. The middle cerebral arteries disappear into the fossa Sylvius almost as soon as given off the internal carotid. They are united to the posterior cerebral arteries, branches of the basilar, by the posterior communicating, thus completing the circle of Willis, within which are the structures constituting the floor of the third ventricle.

A tumor developing from cells about the infundibular stalk would necessarily be within the circle of Willis. As the mass becomes more extensive it produces an ever increasing

intracranial pressure, which in a great measure accounts for the headaches. Intracranial pressure of this type is not always accounted for by the presence of foreign bodies. Cushing and Davidoff described an acromegalic who showed a normal sella turcica with no tumor intracranially, yet during the entire time from his twenty-third year to the time of death, a matter of almost 30 years, he suffered most excruciating headaches. It is extremely interesting to note that in this particular case, although the patient showed very marked evidences of acromegaly, postmortem examination did not disclose a distorted sella nor anything that might be termed a tumor in the sella. Enlarged size of the internal carotid and quite tortuous basilar arteries were observed. The report of this and similar cases makes one feel that intracranial pressure does not always produce headaches. However, in the case of intrasellar tumors the persistent and excruciating headaches can safely be attributed to the increasing size of the tumor which in turn causes an ever increasing intracranial pressure.

The tumor in its development in every direction has been known to break through the floor of the third ventricle, passing upward, breaking through the foramen of Monroe into the lateral ventricle. Or, as it makes its way forward, it soon comes in contact with the optic chiasm which it pushes before it until checked by the anterior portion of the *circulus arteriosus*. The new growth, as it becomes ever larger, pushes the chiasm ever more forward until the cerebral arteries are tightly stretched about the optic fibers. Here the arteries beat against optic chiasm with each pulsation as though they were a hammer forging a tool on an anvil. The fibers soon become atrophic. The writer saw a specimen, not long ago, where along the entire chiasm was a deep groove produced by the anterior cerebral vessels. Visual difficulties up to total blindness are not of infrequent occurrence. The vascular circulation is impeded and markedly disturbed, with an accompanying cerebral anemia. Vertigo, vomiting, failing intelligence, somnolence, apathy, inertia, logginess and drowsiness follow. The tumor mass may

slip along the optic sheath of the optic nerve, breaking through the optic foramen, invading the orbit, dislodging and pressing the optic bulb forward and producing a protrusio bulbi. Or it may imbed itself deeply in the cerebral substance of the frontal lobe. Passing backward, it may invade the cerebral peduncles or the pons. Pushing its way sideways the temporal lobe may be invaded, the uncus severely compressed or even destroyed. Not infrequently, the tumor mass changes its benign character and becomes malignant. The destruction that follows is much greater and much more rapid. In contemplating the invasions of these many vital organs by a growing foreign body it does not take large imaginative powers to conceive of the varied clinical picture with which the clinician is faced.

The function of the pituitary gland seems to be absolutely essential to the needs of life. A total destruction of the same must inevitably lead to death. A thrombosis, an embolus, a tuberculous invasion of the vessels supplying this gland, results in cachexia hypophyseos, or Simmon's disease, which is not unlike that of cachexia strumapriiva in its action. Cachexia hypophyseos has been mistaken for lues and treated as such, even though Wassermann and spinal fluid reactions were negative. The disease is invariably followed by gradual weakness, loss of appetite, atrophy of the genitals, and derangement of the sexual activity shown in man by impotence and in women by cessation of menstruation. Appearance of the individual becomes altered. There ensues a gradual falling out of the teeth, hair, atrophy of the breasts, anemia, gradual wasting, weakness and finally death. Recently, the writer was invited by the pathologist of a leading hospital to examine the history of a female that had died at the age of about 40 years. She first appeared for treatment because of weakness, loss of appetite and a gradual change of temperament, at one of the New York City hospitals. From there she was taken by her relatives to another well known institution where the diagnosis of lues was made, and was given antiluetic treat-

ment. Not showing any improvement, she finally reached the hospital where I was invited to look over the records. At this institution she was also given antiluetic medication, although her Wassermann and spinal tap were both negative. On account of the gradually increasing anemia, she was given several blood transfusions, all of which seemed to have no beneficial results. The hospital charts seemed to disclose a typical Simmon's disease. At the postmortem examination the pathologist did not find any evidence to account for the clinical picture as observed for several months. After going over the findings of the several organs, and not finding pathologic changes to account for death, the histologic findings of the hypophyseal gland were called for and the writer was informed that an attempt was made to look at the gland and to remove the same, but on account of being very mushy it was left in the cranial vault and not examined. In this case, we were in all probability dealing with a thrombosis of the vessels supplying the gland and which caused degeneration of the pituitary gland.

The hypophyseal gland can undergo hypertrophies which may be physiologic or pathologic. Pathologic hypertrophies have already been discussed under the heading of acromegaly. Physiologic hypertrophies occur in castrated men and women and animals; further, in aplasias of the thyroid gland, in cachexia strumapriiva and myxedema; still further, physiologic hypertrophies occur in normal pregnancies. According to Erdheim and Stumme the principle cells increase markedly in number as well as in size. These authors inform us that the cells become filled with a rich granular protoplasm during pregnancy. The cells which thus undergo this change are called "pregnancy cells" by these same authors. At postpartum the pregnancy cells undergo an atrophy and become indistinguishable from the principle cells. But not all cells which have become pregnancy cells undergo an involution and disappear from the picture as such. Some of them remain permanently, so that the hypophyseal gland remains somewhat permanently enlarged after pregnancy. At each suc-

ceeding pregnancy the same process takes place, and after each delivery the gland retains a portion of the increased size permanently, so that in multipara the hypophyseal gland is considerably larger than in virgins.

In man and in nullipara Erdheim found the average weight to be 0.56 gm., in primipara at birth 0.87 gm. The average weight in the multipara after pregnancy is 1.06 gm. The maximum weight in the primipara is 1.10 gm. and in the multipara 1.65 gm.

The embryonal anlage of the anterior lobe is a small hollow vesicle. Out of the anterior wall of this vesicle the anterior lobe of the pituitary, and out of its posterior wall the pars intermedia of the lower animals, are developed. In lower animals there exists an open hypophyseal space persisting through life remnant of the hollow anlage.

The human being, according to Erdheim, has no pars intermedia. That which is commonly accepted as the pars intermedia in man is rather the so-called Rathke cysts. These, however, are not homologous with the animal pars intermedia, but of the animal hypophyseal space, and are not made of the component parts of the animal pars intermedia but of anterior lobe structure imperfectly differentiated. In function, it would necessarily be akin to that of the anterior lobe. The colloid contained in the cysts is, like the colloid found in the anterior lobe, remains of a primitive external secretion. Now then, since the human does not have a pars intermedia, there can be no disease of the pars intermedia. No changes can take place in what does not exist. For that reason it would be unfair to transfer our observation of the pathology of the pars intermedia of the animal upon man.

It must be distinctly understood that not all authors are of the same opinion regarding the existence or nonexistence of the intermediate lobe. There are some investigators who are very firm in their belief that an intermediate lobe exists in man, while Erdheim is just as firm in his belief that no pars intermedia can be shown to exist. After studies of a large number of microscopic preparations of the pituitary gland under Erdheim and

Priesel, I must take my place beside Erdheim in the belief that in man there does not exist any pars intermedia, and what has been described as such, I am inclined to believe are the Rathke cysts.

NASAL ASPECTS OF GYNECOLOGY

DONALD A. CURTIS, M.D.,

Hackensack, N. J.

That the nose must not be overlooked in our search for sources of trouble of a gynecologic nature is a fact commonly forgotten. This was recognized years ago by Fliess, Mayer, and Brettauer, and is mentioned by most modern authors, though the literature on the subject is exceedingly scant.

Histologically, we know that in the region of the inferior turbinates in the nose, we find, in the submucous connective tissue, a well developed vascular plexus, rich in venous vessels, forming a tissue much like erectile tissue. There are many aspects to the undoubted, though little understood, interrelationship between this nasal tissue, and the genital organs. Rehberger states that among the causes of epistaxis are vicarious menstruation, pregnancy, and amenorrhea from other causes, and, also, that nasal affections often cause dysmenorrhea. He notes that the application of 2 - 4% cocain solution to the nasal mucosa over Fliess' "genital spots", tuberculum septi, and anterior inferior turbinates, often cures dysmenorrhea, which has proved obstinate to all other forms of treatment.

Graves describes the curious connection between these widely separated anatomic structures, stating that the sense of smell is a powerful sexual irritant, that changes take place in the nasal mucous membrane at menstruation, that vicarious menstruation is usually manifested by nasal hemorrhage, and that nosebleeds are frequent at the

time of normal menstruation, and at puberty in both sexes. He notes that anomalies of nasal secretion often occur with the catamenia, either as an acute nasal catarrh with hypersecretion, or abnormal dryness of the nasal mucosa. Nasal affections are likewise more common at the menstrual period when this is not normal, and particularly when associated with dysmenorrhea, and in neurotics. A disturbed olfactory sense or increased nasal sensitiveness often occurs in sexual perverts, and after excesses. Cohabitation may cause acute swelling and discharge from the nose, or an unnatural dryness of nose and throat, while lack of nasal secretion has been noted in those who masturbate. In these latter cases there is associated, at times, thick, coarse nose and lips, similar to the facies in pituitary disorders. Often, at the climacteric, we get severe, intractable nasal catarrh, associated with hyperesthesia of the fifth nerve, or a dryness and stoppage of the nose, adenoid and polypoid growths, or an eczema extending from the outer skin of the nostrils to the mucous membrane.

Bandler states that vicarious menstruation most often occurs from the lower turbinates in the nose, and is frequently associated with rudimentary uterus, absence of adnexa on one side, or vaginal defects. This may be associated with nausea, vomiting, prostration, and severe pain from cumulative ovarian secretion. Vicarious menstruation usually ceases when the flow is well established, and during pregnancy.

Polak recognizes that lesions remote from the genitals may cause dysmenorrhea, chiefly those in the nasal mucosa, calling attention to the engorgement and tumefaction in Fliess' genital spots in the nasal mucosa, which swell and become cyanotic at the menstrual period. He has cured many cases of dysmenorrhea of this type by the use of cocain, cautery, or trichloroacetic acid applied to this spot.

Based upon this relationship, Hofbauer, (Jour. A. M. A., July 2, 1927), reports a series of 70 cases in which induction of labor was attempted by the insertion of a pledget

of cotton moistened with 10-20 minims pituitary extract under the anterior end of the inferior turbinate. This proved successful in all 40 cases of toxemia, post-maturity, pyelitis, hydramnios, and dead fetus, and failed in 9 of 21 cases of normal pregnant women in the last month of term.

From the rhinologist's standpoint, Packard notes that reflex disturbances of the sexual apparatus, in both sexes, are common as the result of intranasal disease. He describes the marked congestion of the turbinates at the menstrual period, the frequent occurrence of epistaxis at the time of puberty (in both boys and girls) and cites a case of priapism connected with disturbance of vasomotor nature within the nose.

Hays states that erectile tissue develops within the mucosa over the turbinates at the time of puberty, and that this tissue swells and causes frequent nasal obstruction simulating head colds at this time. He also notes that attacks of hay-fever seldom begin before puberty.

Duke has noted severe manifestations of allergy each month prior to the menstrual flow, associated with dysmenorrhea, and ceasing when the flow is well established. This may also occur following the weaning of a baby. He believes there is an "endogenous allergy", and that some patients are hypersensitive to substances developed within their own bodies. He has seen dysmenorrhea caused by treatments with foreign proteins, and by eating certain foodstuffs; and which has disappeared when the exciting agent is removed. He also states that sufferers from asthma and hay-fever may be relieved, or made worse, by pregnancy.

Following is a brief summary of a few cases coming under my notice in the past year, which illustrate the observations quoted above.

CASE RECORDS IN BRIEF

(1) A. K., 55, married, complained of continuous head colds for 3 months, hot flashes, and backache, with scanty menses.

Head colds disappeared after treatment with ovarian extract.

(2) A. K., 19, single, complained of tenderness over left ovary, indigestion, skips every other month, severe dysmenorrhea, chronic nasal and pharyngeal catarrh. Pain at periods markedly improved following removal of tonsils and adenoids.

(3) I. J., 23, married, had one baby die at age 3 months, 3 miscarriages, last baby 6 months premature, with placenta praevia. Dysmenorrhea, epistaxis, itching of inside of nose, and swelling of eyes for past year at time of periods.

(4) B. G., 32, married, complained of continuous head colds, menses regular but scanty, dysmenorrhea. Greatly relieved by application of adrenalin chloride solution to nasal mucosa prior to flow.

(5) M. F., 38, single, extremely neurotic, numberless complaints, dysmenorrhea and scanty flow relieved by operation on nasal septum.

(6) G. C., 18, single, complained of chronic coryza past 2 years, frequent attacks of herpes and urticaria, sneezing, nasal hypersecretion, and hot flashes before each period. Premenstrual dysmenorrhea, and epistaxis. Left side of nose swollen and congested. Free of symptoms for 6 months since application of cocain 2% and adrenalin chloride 1:1000 solution to nasal mucosa on left side a few days prior to expected flow.

(7) S. C., 21, single, complained of se-

vere nosebleeds and dysmenorrhea at each period. Both symptoms absent during 2 recent pregnancies, and recurred after miscarriage in both instances.

(8) M. B., 26, married, complained of severe nosebleed associated with attacks of pain in the region of left ovary.

(9) A. B., 60, married, complained of attacks of hay-fever, rhinitis, and severe spells of sneezing ever since climacteric. Marked relief after applying adrenalin and anesthine cream locally, and corpus luteum internally.

(10) M. A., 32, married, complained of roaring in head and coryza before each period, scanty flow, and loss of sexual appetite.

(11) L. W., 36, single, complained of nasal catarrh, worse before each period, and dysmenorrhea.

(12) R. S., 15, single, has never menstruated, complains of severe epistaxis, olfactory disturbances, and faintness each month.

The purpose of this paper is to recall to your attention this curious interrelationship existing between the nasal mucosa and the genital tract, that proper cognizance of this may be taken in case histories of patients in whom this fact may have any importance. It is suggested that careful nasal examination, and perhaps intranasal therapy, might be of value in obstinate gynecologic ailments, particularly when no marked genital pathology is found, and, conversely, that a search be made for possible pelvic disease when certain nasal disorders do not readily yield to treatment.

Journey's End

How shall I learn to leave earth's treasured things. . . .

The quietude of afterglow, the far
Faint singing of an opal wave; white wings
Etched in frail rhythms on the sky; a star
That keeps a silver vigil . . . evening's
breeze,

The crimson glory of a rose, and rain's
Battalions tramping down their chalices. . . .
How shall I learn to leave familiar lanes?

Shall I go softly as the sunset slips

Its golden fingers from these quiet trees,
As softly as this quivering shadow drips

Across the lawn in purple rhapsodies. . . .
As softly as a mellow-throated bird,—

Slip like the stars at dawn, unseen un-
heard?

—Daniel Whitehead Hicky.

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SUCCESSFUL CONVENTION

The 162nd Annual Meeting of the Medical Society of New Jersey proved to be the largest and best in the long history of this organization. Despite America's devotion to the general slogan "Bigger and Better", a thing is not necessarily better because of its greater size. Still, in this instance, it is pleasing to note the larger number of registered attendants. For the first time our recorded total attendance passed the thousand mark; in 1927 it was 907; in 1928, 1010; an increase of 103, or a trifle over 11%. The number of members registered was 443, as compared to 390 the previous year; an increase of approximately 14%. Such evidence of growth is very gratifying to those who labored upon construction of the program and development of the infinite details attending upon such a convention.

If we could determine accurately the reasons for this year's increased interest, as evidenced by attendance, the result might be helpful to officers and committees upon whom will fall the duty of preparing for the meeting of next year. Unfortunately, that cannot be done, but we may to some extent analyze the situation, note wherein conditions differed from previous meetings, and draw some inferences of an explanatory character.

The general scientific program was most attractive, and yet we cannot see a sufficient degree of difference in that respect to account for a material increase of attendance. To what extent the new sections showed drawing power it is difficult to say but we believe it was very considerable, and probably accounts

for the major portion of increased attendance. At all times, throughout the 4 sessions of each section on Thursday and Friday, the meeting rooms were well filled and interest in these special programs was deep and sustained.

The next most important difference from previous meetings was the coincident gathering of the Woman's Auxiliary, where the registration figures mounted well above 100. There is no doubt in our mind that a large share of the credit for increased general attendance is due to the Auxiliary. If called upon to apportion the honors we would say that at least as much credit for bringing members to the convention was attributable to the Auxiliary as to either of the new section programs.

Judging from figures presented in the past it would seem fair to say that an allowance of 10% would cover the normal natural swelling of membership registration. If the remaining 90% of the increase be divided equally among the Auxiliary and the two new section meetings, we find that each of these 3 factors proved their value to the Society in a decided manner, and the conclusion points clearly the direction for further developmental work.

Definite and clean-cut separation of the House of Delegates from the general sessions proved most satisfactory; doing away entirely with conflict of interests and interference with proceedings. The amount of business demanding serious consideration by the Delegates is now become so great that a full day of time is none too much, and it is to be hoped the plan that worked so well this year will be continued.

In Memoriam

JENNINGS, Charles Hinchman, of Merchantville, N. J., died May 13, 1928, at the age of 70. Born on a farm near Mt. Ephraim, February 25, 1858, the son of Jehn and Anna B. Jennings, he was educated in the public schools of Camden. At the age of 17 he was apprenticed for a period of 3 years to the Gloucester Iron Works, and learned the trade of moulder. At the expiration of that service he decided to study pharmacy and after a course of practical experience in Camden became a registered pharmacist in 1880 and established the first drug store in Merchantville. Success in this business venture led him to enter upon the study of medicine and he received his medical degree from Jefferson Medical College in 1889.

In Merchantville, Dr. Jennings built up a large practice, which he held until failing health compelled him recently to retire. As a physician he was not only professionally successful but drew his patients into a strong, personal friendship. In religion he was a Methodist. A thirty-second degree Mason, he was Past Master of his Lodge. In the Camden City and County Medical Societies he had always taken an active part and in the latter had been honored with the presidency.

SMITH, Arthur L., died at his home, 62 Bayard Street, New Brunswick, June 11, 1928, after an illness of 2 years' duration.

Dr. Smith had practiced in New Brunswick for 37 years and was the oldest physician in that city. Born in West Worthington, Massachusetts, in 1863, he had attained the age of 65 years. He received his education at Rochester University and graduated in medicine at the University of Pennsylvania in 1870.

Well known for his surgical skill, Dr. Smith was Chief of Staff at Middlesex General Hospital and Consulting Surgeon at St. Peter's Hospital, New Brunswick. He served as chairman of the State Medical Advisory Board during the administration of Governor Silzer; was a Permanent Delegate to the Medical Society of New Jersey; an ex-President of the Middlesex County Medical Society; and had been a member of the New Brunswick Board of Education for 12 years. There was no important civic undertaking to which he did not render valuable aid.

RINGLAND, Robert Finley, formerly of Montclair, New Jersey, died in California on Monday, May 21, 1928, after a prolonged period of illness.

Dr. Ringland was born in Montclair about 42 years ago. He was a graduate of the Montclair High School and obtained his medical degree from the College of Physicians and Surgeons, New York. He served his internship in Staten Island Hospital and began his practice in Bloomfield. A few years later he moved to Montclair. He was a specialist in obstetrics and a member of the medical staff at Mountainside Hospital.

TESTIMONIAL DINNER

to

HENRY O. REIK, M. D.

In Celebration of His Sixtieth Birthday

(Reported by Miss Margaret M. Mahoney)

A Testimonial Dinner was tendered Dr. Henry O. Reik, in commemoration of his sixtieth birthday, by the Medical Society of New Jersey and the Tristate Medical Conference (composed of the officers of the Medical Societies of New York, Pennsylvania and New Jersey) at the Hotel Chelsea, Atlantic City, May 26, 1928.

In one of the private dining rooms stood a large ovoid table most tastefully decorated. In recognition of the guest's love of nature, the setting represented a "park"; plants and flowers surrounding a lake, in the center of which was a fountain, and colored lights played intermittently upon the flowing waters.

Dr. Arthur C. Morgan, President of the Medical Society of Pennsylvania, acting as toastmaster, sat at the head of this table with the Guest of Honor at his right, and counting from the toastmaster's left were seated the following friends: James E. Sadlier, of Poughkeepsie, President Medical Society of New York State; Philip Marvel, Atlantic City; James Hunter, Westville; Clarence Way, Sea Isle City; Daniel F. Remer, Mt. Holly; Richard D. Anderson, Burlington; William Edgar Darnall, Atlantic City; Martin W. Reddan, Trenton; James J. McGuire, Trenton; Harry R. North, Trenton; Clarence L. Andrews, Atlantic City; D. Leo Haggerty, Trenton; Alexander Macalister, Camden; B. F. McMahon, Morristown; P. du Bois Bunting, Elizabeth; George N. J. Sommer, Trenton; Ephraim R. Mulford, Burlington; Walt P. Conaway, Atlantic City, President Medical Society of New Jersey; Barton Cooke Hirst, Philadelphia; Seth Brumm, Philadelphia; John Bennett Morrison, Newark; Charles S. McGivern, Atlantic City; W. D. Olmstead, Atlantic City; A. Haines Lippincott, Camden; Thomas B. Lee, Camden; W. Blair Stewart, Atlantic City; Ralph K. Hollinshed, Westville; William C. Westcott, Atlantic City; J. Harris Underwood, Woodbury; John Hammond Bradshaw, Orange; Gordon K. Dickinson, Jersey City; Frank C. Hammond, Phil-

adelphia, Editor of the Atlantic Medical Journal; Harry W. Albertson, Scranton, Ex-President Medical Society of Pennsylvania.

Telegrams and letters were presented from: Olin West, Secretary and General Manager American Medical Association; Joseph H. Lawrence, Executive Secretary Medical Society of New York State; William Sharpless, West Chester, Penna.; William G. Schauffler, Princeton; Charles D. Bennett, Summit; Thomas W. Harvey, Orange; David F. Weeks, Skillman; Andrew F. McBride, Paterson; E. S. Sherman, Newark; Charles B. Kelley, Jersey City; Herschel Pettit, Ocean City.

Dr. A. C. Morgan (Toastmaster): Gentlemen, you have enjoyed a good dinner but there is yet another feast awaiting, for we are gathered here tonight to honor our guest, a man we all love—Doctor Henry O. Reik. For the moment I merely present him to you and ask him to hear what we think of him. I heard a story once of a man in a county town, who was running for office. The Editor of the town paper had some grudge against this candidate and one morning the latter's wife said to him: "John, just see what this fellow has said about you today. Go to him and make him prove what he says." The man replied: "My dear, I don't want him to prove it." Perhaps our guest may feel some wonder as to what we are going to say, and that he may be in a similar predicament, but I know he has weathered many storms, that he passed safely through the World War, and that he need have no fear of what we shall say to him, for we want him to see, as in a looking glass, himself as others see him. Among us are men who, at different stages, have watched him all the way through life, and, as I wish to start with his boyhood days, I shall first call upon one who has known him since that early period, Dr. Philip Marvel.

Dr. Marvel: Having known our good friend from very early boyhood days, I might tell

some things he would rather I should keep to myself, but I shall prefer to speak of a few things which even then pointed directly to the character that has been verified during his short life with us here in New Jersey.

It was in 1883 that I was commanded by the Superintendent of Public Schools in Delaware to go to Frederica—a small town which most of you have never seen on the map—to straighten out a situation in the educational field. Frederica was then, and is still a village of less than a thousand inhabitants, situated on the Murderkill River, or Creek, an arm of the Delaware Bay, running a tortuous course of possibly 10 miles into the heart of Kent County. The school condition was one of such general disorder that teachers and school authorities were seriously considering closing the institution. As I came away from my first meeting with the local school directors, passing a group of boys in the street, my attention was attracted to a blue-eyed, curly-haired lad—with a head that might have tempted a poet to speak of him as a cherub, but about whom I held no such thought. They were engaged in a game of marbles, and there soon developed a squabble and a physical combat. I need not tell you how he came out of the battle, but the game of marbles was finished. After a pleasant conversation with that boy, I invited myself, and he agreed, to meet his parents. From that day until this I have held friendship and fellowship with the blue-eyed, curly-haired urchin that has grown into the 60 year old honored guest of this evening, and it has been interesting to watch his career.

After a period in the Frederica Public School, the scene changes, he is going out into the larger world, and we find him first behind the counter of a drug store in Baltimore. In a short time he had acquired a degree of Ph. G., which would have satisfied most young men, but not our friend; ambition led him to become a follower of Aesculapius and he matriculated at the University of Maryland under the old-time method of "preceptorship"—a distinguished physician of Baltimore who had observed his work in the pharmacy having stimulated his ambition and volunteered to take him on as a "reader of medicine" and to guide his studies. At this time it was necessary for him to serve two masters, his University studies by day and his pharmaceutical labors by night, but he thus earned his degree of M. D.

Now the average individual would have felt that he had accomplished something and would have remained quiet for a time, but not this man. In a few months he was at the Johns Hopkins Hospital Laboratories seeking post-graduate work. And who are the instructors

he has chosen? None less than "Popsy" Welch, Simon Flexner and "Billy" Thayer, men whom we all reverence. Dropping into the hospital clinics, he soon became attached to that lovable character, Samuel Theobald, and was launched upon the sea of medical specialism. Observing that diseases of the ear were sadly neglected in the clinic, he directed attention to that field, sought out America's greatest otologist, Clarence John Blake, and was soon studying in the classic shades of Harvard and in the clinics of Boston, city of learning. Pursuing knowledge of the specialty in which he was later to become famed, he visited Berlin and Vienna, but his early home refinement made him too sympathetic to face the treatment, often rough and harsh, handed out to patients in German clinics. So, he traveled to London and Glasgow to work in old Moorfield's Eye Hospital, and to sit at the feet of the leading English otologist, Thomas Barr, and the illustrious brain surgeon of that day, Sir William MacEwen. Always we find him seeking the noblest and the best of teachers in the medical world.

Returning home he was prepared to take up teaching at the new Johns Hopkins Medical School, first as an Instructor, and later as an Associate Professor. Success attended his labors in this direction as well as in the acquisition of a large private practice and prospects for the future looked brilliant. Then came an insidious enemy—a nasty infection. After a prolonged and serious battle with general septicemia he came out victor, but with a right hand so badly crippled that he had to abandon the field of delicate surgery for which he had spent so many years in training.

He was not, however, to be beaten; he would not be put aside by an infirmity. In early youth he had shown marked independence and ingenuity. At 9 years of age he was earning a portion of his own keep by making strawberry baskets at home after school hours; in after years did various odd jobs on nearby farms between school periods; he bought the first printing press that his town had ever seen and printed envelopes, letter heads and handbills for the local merchants; he has always been busy at something. So, when affliction disabled him for the work he most wanted to perform, it was characteristic of him to face the situation and look for something that he could do. Having been a teacher, he naturally turned toward the lecture platform, mastered the newest form of photography and prepared to launch a series of travel lectures. Just then America entered the World War. As he had been urging this course of action from the beginning of the attack upon Bel-



HENRY O. REIK, M. D.

gium, he was now prompt to offer his services, and the Surgeon General's office was glad to commission him despite the defective hand.

Knowing that others will take up his life story at this point, I shall not trespass further, but I do want to say that from the first moment of my meeting with this boy I have been conscious of his possession of a sturdy character that makes life a success. Gentleness of manner, family affection, sympathy for humanity, love of companionship, are traits that have characterized him throughout life, and in him I have observed the truth of the axiom that what we send out into the lives of others comes back to us; his affection for humanity has made him lovable.

Toastmaster: The next speaker, Dr. Seth Brumm, will tell us something of the war record of our guest and the conditions under which these kindred spirits met.

Dr. Seth Brumm: Some weeks ago Dr. Conaway casually informed me of an impending dinner in Dr. Reik's honor, and asked if I knew him. "Know him", said I, "why we fought the World War together". Then he declared that I might count myself booked to speak tonight. I feel now much like the whale that swallowed Jonah; if I had kept my mouth shut I would not be in this predicament. Yet, I am not altogether sorry, for I am enjoying this occasion and will be happy to pay my tribute to Colonel Reik.

I had the privilege of knowing him before we were mustered into service in the U. S. Army; knew him in that period which Dr. Marvel has referred to, when he was eminent as an otologist. When the Bárány discoveries were made known to the world I assisted in a demonstration of his theories at the Johns Hopkins Hospital Medical Society, and it was Dr. Reik who greeted me and my Philadelphia confrères on behalf of the Baltimore medical men and whose courteous reception made that visit memorable.

When I entered the army, Colonel Mosher assigned me to Camp Sheridan, at Montgomery, Alabama, and almost the first man I met after arrival there was Major Reik. Of course I immediately felt quite at home and we had many delightful hours together in camp and in Base Hospital work. In army as in civil life, Reik was faithful in the performance of duty but sociable and companionable to a degree that made him the outstanding officer of the camp. His kindness, tact, and good judgment caused him to be consulted about everything. Indeed, he was ubiquitous. If there was a wedding in camp, it was Major Reik

who gave the bride away; if army regulations were disregarded by social groups from the city, who wanted to entertain and favor the soldiers, it was Major Reik who served as arbiter and prevented a civil war; when we lost one of our higher officers by death, Major Reik was designated to arrange and conduct the funeral services. His influence upon us all was marvelous and he made army life not only bearable but almost a delightful experience. I recall that the variety of ways in which he served among us led to his becoming generally known to his intimates as "Mr. Fixit". Is it any wonder that we were sorry when he received orders to proceed to France? "Over there" his good work continued and he was soon made Commanding Officer of U. S. A. Base Hospital 67, the first hospital set up in what came to be the largest American Hospital Center in France. At Sheridan we had served under Colonel David Baker, as C. O. of the Hospital, and he took a Base Hospital unit to France about a month before Reik was sent over. In due time Colonel Baker received notice of a pending promotion, and it is recorded that he requested "Headquarters" to send Major Reik to take command of his old organization. I think that is a tremendous compliment; the only instance I know of, where a regular army officer expressed such confidence in an officer of the volunteer reserves. In a successful army career, Dr. Reik passed by merited promotion through all the ranks from Captain to Colonel, his work receiving approval at every stage and his friendships growing with officers and enlisted men alike.

And now, Colonel Reik, I wish to say to you that we all love you, we all extend hearty good wishes, and we hope you will continue to "carry on" and bring to a satisfactory conclusion the many good works you have originated here. We need you, New Jersey needs you, the United States of America needs you, and it is my prayer that we may join you in many more dinners, with you as active and resourceful as ever.

Toastmaster: In the course of travel over the life of our guest we shall now make a short detour from the road as mapped, and I will call upon Dr. Alexander Macalister as the next speaker.

Dr. Macalister: I am personally gratified by the opportunity afforded me to pay my respects to Dr. Reik, Editor of the State Medical Journal, and, like all who know him, I feel honored by his friendship.

This day, I am told, is the sixtieth anni-

versary of his birth, but why there should be any emphasis on the "sixty" I am unable to understand, for, I am sure, the doctor comes within the class contemplated by the man who wrote "Whom the Gods love die young no matter how long they live."

The late Sir William Osler once playfully spoke of chloroforming men when they reached the age of 60, and, of course, the professional jokesmiths on newspaper staffs converted that bit of jest into popular belief, but Dr. Osler himself worked hard until he was 70, and passed away *then* for the primary reason that he had worked too hard. We should see to it that men like Dr. Osler, and our guest, Dr. Reik, are not permitted to die before their time—if there is such a thing as a time for dying. Personally, I believe that the laboratory will some day show us that we need not die at the Psalmist's three-score-and-ten, or even at 80, or 90.

Judging from his mental powers, and his ambition, our guest of honor is not 60—at least not 60 mentally. As I look at him, and recall some of his achievements, I am disposed to twist Doctor Oliver Wendell Holmes' lines to the singular number, and then quoting them:

"Hang the Almanac's Cheat and the Catalogue's spite!
Old Time is a liar! The man's twenty tonight!"

While his work bears all the marks of careful thought, based upon experience, he has the spirit of youth, for his ambition is boundless, and his beliefs of the most optimistic sort. May he stay so long among us that we shall cease to put any number on his anniversary, and shall simply say:

"*Everybody!* Stand up! It's *His* day!
Drink to his health and happiness!"

Toastmaster: You have heard of some of the remarkable achievements of our guest of honor and I would direct your attention to the fact that not the least of these was the formation of the Tristate Medical Conference—one of the finest products of his own head and heart. Our next speaker has just a few days ago completed his term of office as President of the Medical Society of the state of New York, and he can tell us what that "Conference" means to every man who has had the honor of sitting around that table, founded and firmly established through the happy thought and persistent energy of our guest. I present Dr. James E. Sadlier, Retiring President of the Medical Society of New York State.

Dr. Sadlier: I wish to assure you that I am very greatly pleased to be with you, not only to do honor to our distinguished guest but to talk to you a bit with reference to this rather young organization of which Dr. Reik is the real father, but, before I take up that phase of it I would just like to mention that it is especially gratifying to me to be here as part of the program gotten up by the oldest and most distinguished state medical society in the United States, the Medical Society of New Jersey.

This has been for me a week full of anxiety, regret and pleasure. Anxiety, naturally, over the meeting of our state medical organization just finished Thursday. Regret that the service which a president must naturally give to his state organization during his term of service according to circumstances came to an end. But very definite pleasure over two things: The pleasure of being here with you tonight and expressing my appreciation of the man who is our honored guest, and who is the one person who has developed this organization known as the Tristate Medical Conference. The other great source of pleasure during the present week was imparted to me by our toastmaster and by the most recent President of the Pennsylvania State Medical Society, Dr. Albertson, when they told me up in Albany, a few days ago, that even though I was a Past-President, I would still be a member of the Tristate Conference. Before I even became President-elect of the Medical Society of the State of New York, I heard of and became acquainted a bit with what this conference of the officers of these 3 states, New Jersey, Pennsylvania and New York, were doing. This little group meets once every 4 months to talk over problems associated with the practice of medicine in these 3 states. And when, by virtue of my office, I became a member of that organization, I was impressed at once with the wonderful things that Dr. Reik had developed. We all have our problems, our medical problems, perhaps a little different in one state than the other. Each can learn from the other and in these conferences which we have had during the past 2 years that I have been associated with them, it has impressed me how great this small organization is and what a power for future usefulness to the medical profession and benefit to the great mass of citizens in these 3 states. It is with a great deal of pleasure that we know the northeastern states have banded together into a similar committee; they have, perhaps, gone us one better, for in their activities they have taken over the Boston Medical and Surgical Journal. I am not going to take up all of the

various matters that have been discussed in the Tristate Conferences but I just want to speak of one or two that were to my mind particularly important.

I imagine most of you gentlemen are rather fully informed with reference to the hospital situation in this country. You naturally would say that people go to hospitals or large institutions that are governed by trustees, that have been inspected by state officials, and that the hospital situation in the United States is one that is pretty thoroughly cared for. And perhaps you would be rather shocked to know that the private hospitals in the United States, the institutions that are operated by one man or by half a dozen men, that have no state nor governmental inspection, that are under no Board of Trustees—are caring for something over 40% of the sick. One of the problems that Dr. Morrison of the State of New Jersey brought before the Tristate Conference at its meeting on October 22 last year, and brought out in such a masterly discussion that impressed us all with its importance, was the lack of state control over such institutions. It was concluded that in the large territory comprising these 3 states, containing a very large proportion of the population of this country, we should take the initiative in solving this problem and see that some legislation is enacted that will bring all hospitals, irrespective of size or ownership, under proper governmental control.

The problem brought out in Scranton last summer relating to the question of "medical publicity" has a very definite bearing on some of our important problems at the present time. I presume that many of you feel, as I feel, that while we are taking increasingly good care, better and better each year, of persons afflicted by disease, the great question of preventive medicine has as yet only had the surface scratched. We who have been so busy in our care of the actually sick had neglected that great phase of work. Some of us have been neglectful of duty or of opportunity, and we have allowed lay organizations to preempt in a good many ways a field that belongs to physicians; and we are reaping our reward just now in a most bitter struggle which we can only hope will terminate satisfactorily for our medical brethren in the end. At that meeting in Scranton last summer I was rather surprised how extensive were the ramifications of this problem. But the knowledge gained there was helpful to me as President of our State Society.

I think that we in New York, like you gentlemen of Pennsylvania and New Jersey, owe

Dr. Reik a debt of gratitude which we can never pay. I feel that his work in establishing the Tristate Conference is a thing that will do more good to the medical profession and to the people of these 3 states than any one man could ever have possibly done in the private practice of medicine. He has established something which will carry on year after year. We trust that Dr. Reik may be spared to us for a great many years to come, but long after Reik has passed away and after each and everyone of us have gone to the great beyond, The Tristate Conference will be going on, doing a great big work, and helping in the great cause of saving human lives.

Toastmaster: The next speaker is a member of the official family of the Medical Society of New Jersey, so closely identified with it, in fact, that he almost is the society. Dr. J. Bennett Morrison will tell you of his association in work with our friend Reik.

Dr. J. Bennett Morrison: Among this group of friends it was not my intention to refer to my official position but in as much as our toastmaster has introduced me as the Secretary of the Medical Society of New Jersey, permit me to say that the greatest pleasure I have derived from this position has been the privilege of making a warm personal friend of Henry O. Reik. It is indeed a great pleasure to speak tonight of any one of the many departments in which he has served us so efficiently. I have been requested to confine my remarks to his work in connection with the Editorship of our State Medical Journal. Perhaps it is just as well, for were I to refer to all the departments in which he has served us so faithfully and so well we would probably be here far into the morning hours.

As Editor of our State Medical Journal, Dr. Reik has raised that periodical from a position of mediocrity to that of one of the finest and most influential State Medical Journals published in America. Apart from the Journal of the American Medical Association, our Journal is now looked upon as an index of what is being accomplished in organized medicine east of Chicago. Under Dr. Reik's management it has been materially increased in size and the Board of Trustees has generously stood behind him in the matter of expense, until now it carries more than double the space formerly devoted to original scientific papers and accounts of medical activities. There is now constantly on hand in the Editor's office a sufficient number of these original papers, from within and without the state, to fill the pages of the Journal for 6 months in advance.

The advertising space has also been largely increased and is being eagerly sought for because of the vastly increased importance of the Journal.

Our entire society membership looks upon this periodical with just and deserving pride. We sometimes joke about the Journal not being read, but I assure you that among that portion of the profession in the state interested in scientific medical research and in organized medicine it is very thoroughly read and very highly appreciated. Delinquent members, upon being reinstated, request the copies they have missed and the Editors and Officers of other state societies look forward to its issuance with pleasure.

It requires brains to edit a journal, brains of the quality with which the old master, Reynolds, was wont to mix his paints; it requires initiative, resourcefulness, a mine of information, a granary of facts and a library of ideas; it calls for education, refinement and culture, a fine sense of discrimination and a keen knowledge of human nature. All of these requisites our Reik possesses and with them a rich vocabulary, a fluent tongue, a flowing pen, a breadth of vision and dreams and hopes and aspirations for the welfare of organized medicine and the influence of the profession upon public thought.

The fecundity of his mind is little short of marvelous. We wonder what he uses to lubricate his mental machinery so as to keep it in such a high state of efficiency and productivity.

An editor always has annoyances, discouragements and criticisms. He will be happy indeed if he can allow these to roll off like water from a duck's back. He deals with persons who are constantly seeking to pose in the flare of publicity, who have nothing to say and who require volumes in which to say it. He is severely criticised for using the blue pencil and for making corrections in the glaring liberties that have been taken with the English language. His policies are criticized, his editorials misinterpreted and misquoted, he is importuned to publish this and damned for publishing that.

Reik's work on our Journal has been remarkable for the many new departments he has opened up and developed. His "Observations from the Lighthouse", have rescued many a man lost in the fog and kept him from going on the rocks. They teem with new and practical advances in medicine and are highly appreciated. His departments in "Medical Ethics" and in "Medical Economics" convey

thoughts and ideas from the richest, most cultured and most matured minds in our profession. The articles are succinct, they have the clarity of sparkling wine, and are couched in beautiful English.

When our Editor travels, his pen brings to us a vision of those vast areas undisturbed and undefiled by the hand of man, great beautiful awe-inspiring reaches of mountains and canyons, pinnacles and torrents, which the Creator seems to have set apart for the contemplation of his own handiwork. It is in such vast inaccessible places that the mind of our Editor revels, here his great soul communes with Nature, his eyes feast on her beauty and sublimity, here he basks in her balmy sunshine, laves in her crystal waters and forgets the littleness of man.

I wonder how many of you have attempted to depict this man's character, his beliefs, his emotions, his inspirations, his longings, his heart-aches and his joys in the beautiful gems of poetry with which he intersperses knowledge and philosophy, science and medical activities, gravity and lightness, fact and fancy, in our State Journal. May I recall 2 of these beautiful quotations:

There's a call to go out in the open
To mountains and valleys and pines,
I'm sick of four walls and I'm pinin'
To be where the sun really shines;
To go where the blue's in the heavens,
Sweet waters in river and rill,
Till the ache leaves my heart which it leavens
And I quaff all outdoors to the fill.

The smell of the wood fire at morning,
The drone of the night winds at eve,
The vault with its star gems adorning
Bring balm and a blessed reprieve.
I would hold speech with the mountains
And walk where shy, wild deer have trod,
And find youth again in cool fountains
And joy in the glories of God.

And here is another:

Where is heaven? Not afar
Hid away behind a star,
Not beyond the sculptured granite,
Not upon another planet,
Not in some celestial clime,
After centuries of time,
Not a million miles above us,
But among the hearts that love us;
Not away across the seas,
But in moments such as these,
Not among the distant places
But among familiar faces,—
Any time and anywhere
You may find your heaven there.

To come back to earth, our Editor's versatility is shown in the way in which he dresses up reports. He contrives to have the pro-

ceedings of our Tristate Conference so edited that they hold the interest of all. Dr. Olin West, Secretary of the American Medical Association, tells me that with all the vast amount of material coming to his desk every month for study, review and filing, he reads with greatest pleasure every word of these reports as carried in our Journal. It was thought that Reik nor anybody else could ever secure complete county society reports, and even if they could be secured that they would not be worth reading. Whoever thought that did not know Reik. He has stimulated some of the men in our county societies to write papers of quality, and we even suspect that he sometimes assists in their preparation. He has hammered away at reporters, secretaries and county society officers until now they are ashamed *not* to send in the reports. Reik's dogged persistence, his damned polite insistence, his indomitable will secures results in the very face of discouragement. This man can accomplish the impossible.

In my household this man is never spoken of as Dr. Reik or even as Reik, but is affectionately referred to as "O'Henry".

"O'Henry", we honor you tonight for your attainments and for the marked results of your labors since you have been in our midst, we admire you for your many sided qualities and we love you for your worth as a man. It is given to few individuals to come, unknown, into a community, to command the respect and admiration, to win the esteem and confidence, the love and devotion, both of the profession and the laity, to the extent that you have done in the short time of your service. It has been a privilege for us to adopt you as a brother. Your erudition, your geniality, your charming personality, your fine sympathy and warm affection have endeared you to us all. Without flattery, for we do not flatter, and in all sincerity, we consider you one of God's noblemen.

And so, tonight, this little group of friends extend to you our felicitations upon your birthday, assure you again of our affection and regard, and trust that you may be spared for many years to come to grace the office of Editor of our State Medical Journal.

Toastmaster: Again I shall take the liberty of making a detour, that we may hear from an eminent surgeon and one of the most distinguished of the Ex-Presidents of the Medical Society of New Jersey, Dr. Gordon K. Dickinson, of Jersey City.

Dr. Gordon K. Dickinson: Dr. Reik, and all your friends, I have been listening with much interest to what has been said of you

and your great work. It has been a constant source of delight to me to watch the effect of your labors, to study you and your characteristics, to attempt to determine in my mind why you are so generally successful in whatever you undertake. One has but to look at you to realize that there is a power deep within, something that Philip Marvel caught a glimpse of when watching you at play with marbles, something that Morrison has expressed in affectionately dubbing you "O'Henry". What is that great something in you that has made our Journal noteworthy and galvanized our State Society into new life? I think it is that deep in your personality you have such a profound love of nature—nature in the broadest sense. You love the beautiful, can't ever get far away from the beauty of nature, and yet you are willing to share it with all the world—as you do, for instance, through your wonderful skill with color photography. I congratulate you upon all your successful attainments, upon your love of nature and of humanity, and upon your ability to make all nature love you.

Toastmaster: Now we shall call upon the present popular President of the New Jersey Medical Society, Dr. Walt P. Conaway, another man who makes a habit of accomplishing the impossible, as evidenced by his having visited every county society in his state during his term of office.

Dr. Walt P. Conaway: You are very kind, Mr. Toastmaster, to honor me with an invitation to speak. I am very happy to accept and to add a few more complimentary remarks concerning this very deserving guest whom we are honoring tonight.

Among the many duties of the presiding officer of the Medical Society, not the least important one, is to visit all the county medical societies of the state. At each one of these meetings, and we have attended all of them, it was my very good fortune to be accompanied by either Dr. Reik or Dr. Morrison and on many occasions by both of them. This gave me an additional opportunity to more fully appreciate the excellent work our guest has been doing for the benefit of our Society. The Tristate Conference originated with him, and Dr. Sadlier has well expressed our appreciation of its worth and accomplishment. Our Journal speaks for itself, but Dr. Morrison has spoken some additional words of praise for its improvements, all of which are due to Dr. Reik's efforts. He is very deserving of all the complimentary remarks which have been made about him tonight, and I think this is a just recognition of his ability and valuable services.

To me, this has been a very delightful occasion and I was very happy to serve on the Committee for Arrangements, for I think we are honoring ourselves in honoring Dr. Reik. In conclusion, allow me, Reik, to extend my hearty congratulations. May all your birthdays be equally as enjoyable as this one; may you always enjoy the very best of health; and may the remaining years of your life be free from worry and filled with peace and contentment and happiness.

Toastmaster: Doctor Reik, your friends gathered here this evening wished to have you carry away something more tangible than words whereby to remember this occasion, and I think it is fitting that the memento shall be presented by a fellow editor, your neighbor and devoted brother, Dr. Frank C. Hammond, Editor of the Atlantic Medical Journal, the official organ of the Pennsylvania and Delaware State Medical Societies.

Dr. Frank C. Hammond: My observation of life coincides with the views expressed by the poet who said that "the evil men do lives after them, while the good is oft interred with their bones", and I have often wondered if Shakespeare had physicians in mind when constructing that thought. The name of the architect who designs a great building, of the engineer who builds a bridge, of the gallant soldier in warfare, of the diplomat in the field of statesmanship, these are written into history, but the physician who dedicates his life to the conquest of disease and the welfare of his fellow men is too frequently overlooked or forgotten; generally speaking, the good he has done is interred with his bones. Within the profession, however, we are wont to pause from time to time to gather round a festive board, and to pay homage to brethren whom it is a delight to honor. Tonight it is our privilege to make one of these pauses, to honor our guest upon his natal day. Recurring birthdays are but milestones in the path of life, and we look down the vista of life from these stones to note with what success we have built along the way. It is pleasing to look back over this man's work, to consider his wonderful accomplishments, and to realize that we have had full advantage of his wealth of experience and mature judgment. We have particularly enjoyed association with him as a co-worker.

Now, it has been a beautiful custom from time immemorial to make gifts to those whom we desire to honor. To you, Dr. Reik, let me say that your friends, seeking something appropriate, have gathered from various parts of the earth, precious metals and brilliant

stones—gold and platinum and onyx—and have had these converted into a set of shirt studs, cuff links and vest buttons, and in their behalf I present you with this token of admiration and love. At the same time, may we offer our best wishes for the years to come, years of health and of happiness. May you live long, to continue the excellent work you have been doing, to extend indefinitely your service to humanity, and may we live long to bask in the sunshine of your smile.

DR. REIK'S RESPONSE

It is doubtful if I have ever before been so nearly speechless. I believe it is recorded that my voice was heard in a lusty cry almost immediately after my appearance upon this earth and, as some of your know, I have been making a vocal noise quite constantly ever since. Tonight, you have directed the "big noise" at me, and you have done it so effectually that I am for once overpowered.

I feel about as helpless as the negro elder who was unexpectedly called upon to offer a prayer. He made several futile efforts to get started: "Oh, Lord, give us de power—" "Lord, God 'mighty, bring down on us de power"—"Our, Father, shower down on us de power". At that point a brother across the aisle said: "Brother, seems like taint power you needs so much as ideas."

I have certainly no idea what would constitute a suitable response to this beautiful gift. What can one say under such circumstances? Beautiful beyond my poor powers of description; valuable beyond any just deserts on my part; but, a precious memento that I promise to guard with my life, since you present it as a token of friendship.

Your several speeches have been punctuated with remarks which might in the slang of the day be designated as "hot stuff" and some of the extreme statements reminded me of the colored preacher who was trying to give his congregation a clear conception of the fury of hell. "You all is done seen de molten iron runnin' out fum de furnace, ain't ye?" The congregation nodded assent. "Well", he continued, "dey uses dat kine o' stuff fo' ice cream in de place wha I'm talkin' 'bout."

I wish I could believe all the nice things you have said about me, but I have reason to fear that in your generosity and kindness of heart you have indulged in a bit of exaggeration. It has been stated as a truism that "God never lifted any man so high above his fellows that the music of their voices raised in his praise was not the sweetest sound he ever heard." If that be true of great ones, how much more

aply it fits those in the lower ranks. It is not only difficult, it is almost impossible, for any man to give the best that is within him when out of sight of his fellows and beyond some form of human recognition of his efforts. Most of my work for you has been performed as in the playing of a "lone hand", or is more or less hidden from view in the pages of a journal. No matter how self-contained, no matter how self-sufficient a man appears to be, he feels stronger, he *is* stronger, when he receives the approbation of generous hearts and appreciative minds. So, I shall not pretend to belittle anything you have said; instead, I shall accept it in the belief that you mean it and in the hope that I may have deserved some fractional portion thereof. If I may accept it with a liberal discount, say 50%, I can still feel that if I have merited that proportion of your expressed approval, then I have not lived among you in vain.

When I think of the courtesy and consideration with which I have been treated by the members of the Medical Society of New Jersey and by the officers of the medical societies of the neighboring states of New York and Pennsylvania, I am really amazed. "I was a stranger, and Ye took me in"—could not be said with deeper sense of appreciation and thankfulness than I say it to you. Received with open arms, accorded all sorts of privileges and crowned with authority to speak for organized medicine in this territory, my position was made pleasant and my work a succession of happy events. And, in your treatment of me you will find the explanation for whatever of service I have rendered. I chance to be one of those semi-idiotic individuals who love work. Experience has taught me that there is no joy comparable to that found in work, especially if one can make that work an expression of the best that is in him; of course, one may reach higher pinnacles of joy, experience more acute thrills of pleasure, and realize greater moments of happiness in other fields, but such exquisite sensations are fleeting and though they may leave lasting impressions it is the joy of labor well done upon which we rely for permanent or continuous enjoyment.

Your reception encouraged the indulgence of another personal attribute, perhaps I should say of two personal characteristics: the first being that of delight in rather than shrinking from the small details of any task; the second, a large element in my makeup of what some people have been pleased to call stubbornness, but which I prefer to designate by the more euphonious name of perseverance.

If my work has been good, it is largely because of these factors: trust and confidence on your part; on mine, a love for work and a determination to perform well the duties entrusted to me. If there is one word that more than others has dominated my existence and guided my actions throughout life, it is the word "duty"; to the commands of duty all other desires have always had to be subjected. Tonight, you have justified my faith in a phrase learned in school-boy days, found in two of the most beautiful lines written by the immortal Pope—

"Honour and shame from no condition rise;
Act well your part, there all the honour lies."

My work with the Medical Society of New Jersey has been a source of happiness, not the least satisfying element of which has been the coincident association with a remarkable group of "good-fellows". It has been my good fortune to have had an extended acquaintance with members of the medical profession in America and Europe. It has been my exceptional good fortune to have had close association with many of the leaders of the profession in the United States and with leading specialists in ophthalmology and otology in this and other countries. I can say without any modicum of flattery that nowhere have I met a finer body of men than those who constitute the medical profession of New Jersey. It has been not only a pleasure, it has been a real privilege to be associated with the members of this society and through that association to become intimately acquainted with some of the leaders in the medical professional life of Pennsylvania and New York.

Very naturally, I am inclined this evening to look backward and to consider the great changes that have occurred, not alone within the profession to which we belong but with reference to modes of living and to life itself in all its aspects. Indeed, one of the greatest problems, for the man who reaches or approaches the seventh decade of life, is how to adjust himself with sufficient rapidity to keep up with the daily changes. Readiness to accept new ideas and adjust oneself to new conditions is perhaps the best index to one's resistance to the frailties of advancing age. Dr. Osler once said that the way to keep young was to keep in touch with young people. That is not so easy an accomplishment as it sounds, but perhaps one can effect a reasonable compromise by observing and trying to keep pace with the actions of young folks; by accepting, or at least considering rather than opposing, their points of view; by giving every new

thought a fair hearing and discarding it only when it fails to measure up to the logic of acquired experience. It may be possible thus to defy for a time the advance of age by reception of youthful ideas and retention of youthful enthusiasms.

I shall resist the temptation to refer to specific changes that have occurred during my life but there is one pleasant coincidence that I may be pardoned for referring to. By chance I spent my boyhood in a small town in Delaware, and received in a typical country school of that day my first inspiration to study for the sake of knowledge to be acquired. The one distinctive schoolmaster whom I remember, himself a Delaware boy, who gave me that inspirational start and who has remained through all these years a kindly, compassionate and wise mentor, sits at this table as an honored Ex-President of the Medical Society of New Jersey. During the past year it has been my privilege to serve you under the close personal direction of another Delawarean, the distinguished President of the same society. If you think it would be immodest for me to claim this as evidence that "birds of a feather flock together", at least you will permit me to say that it demonstrates that the "Blue Hen's Chickens" tend to recognize and congregate at a good roosting place.

Marvel and Conaway are to me as old "home state" friends, but there are many others among you for whom I have a very deep affection. Donohoe, whose 200 lb. avoirdupois is 99.4% heart and 0.6% represents normal salt-of-the-earth solution in which the heart floats. Green, who is what I used to hope some day to become—"a gentleman and a scholar". Morrison, of whom I can say no more, and have no desire to say less, than I have already put on record. These men I name not through invidious comparison but because they happen to be the officers with whom I have been most closely associated.

I could call each one of you here present by name and give good reasons for thanking each one for some favor, some courtesy, some act of kindness done unto me. Believe me, I am grateful for each and every such act, and please allow me to thank you collectively.

"Give me a few friends who will love me for what I am, *or am not*, and keep ever burning before my wandering steps the kindly light of hope. And, though age and infirmity overtake me, and I come not in sight of the castle of my dreams, let me still be thankful for life and for time's old memories that are good and sweet; and may the evening twilight find me gentle still." This brings me, gentlemen, to recognition of the fact that you are celebrating my birthday, that particular anniversary which perhaps as nearly as can be estimated marks the line of crossing beyond middle age. I have to acknowledge that it has already become necessary to slow up in some of my activities but I hope to continue actively at work; if not as active with burdens of the heavier type, at least active with lighter duties, and, at all events, deeply engrossed in the solution of some of our medical and medicosocial problems.

I suspect that this event marks the high tide of my career, but from my office window I have observed that the receding tide leaves a clean and pleasant-appearing beach upon which to rest, and that the ebb and flow of the lesser tides are not without meaning and influence. So, like King David at Jerusalem, I shall lift mine eyes unto the hills and seek strength and inspiration from on high. Possibly then I may be able to sing with Thomas Curtis Clark:

"When I am old and days crawl limp and slow,
When stressful duties bring no weariness,
Then I shall calmly sit till sunset glow
Recounting all the hours God sent to bless.

When I am old, and quieted all strife
My heart shall say, how good, how kind, was
life."



Case Report

BILATERAL ACUTE PLEURAL EMPYEMA

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Reports of cases in which acute empyema occurs simultaneously in both pleural cavities are not frequent; 16 cases, clinically recognized and treated, having been reported in the literature since 1914. Mackenzie¹, in 1914, reported 4 cases dealt with during the influenza epidemic of 1899. Stenius² reported from the Helsingfors Clinic 1 such case in 120 cases of empyema. Beck³ reported a case which occurred in a pregnant woman. Auer⁴, Durham⁵, Gundrum⁶, Hedlom⁷, Lund and Morrison⁸, and Mackey⁹, each have reported a single case. Lord¹⁰, in his book, reports 5 instances in 248 cases, or 1 in 50.

Alexander James¹¹ states, in his book on "Pleurisy", that "double empyema is clinically very rare, but is not infrequently seen associated with pulmonary embolism and suppurative developments in grave septic and pyemic conditions on the postmortem table".

There are, probably, cases reported before and since 1914 that have not come to the writer's notice. Even so, the following case of acute bilateral empyema, complicating bilateral pleural effusion of acute pneumonitis of right and left lower lobes, contains enough interesting points to justify reporting.

Miss Pearl S., aged 21, white, referred to hospital by Dr. P. S. Steelman, of Somers Point, N. J., was admitted December 13, 1927, with a diagnosis of acute lobar pneumonia, and discharged as cured January 15, 1928.

Chief complaint: Cough and dyspnea.

Present illness: Two weeks ago had a burning sensation in sternal region and difficulty in swallowing. Headache that night, and the next day had pain in both sides of chest, with dyspnea, but no cough at that time; no chill. Three or 4 days later began to cough but did not raise any sputum. Cough, dyspnea and pain have continued since; the 2 first named symptoms being of about the same intensity all the time, the pain gradually decreasing. Bowels regular; no urinary symptoms. Appetite fairly good, but has been restricted to a liquid diet.

Past history: Measles, mumps, and whooping cough in childhood. No diphtheria or scarlet fever. Typhoid about 6 years ago. No previous attacks of pneumonia. One or 2 colds a year, seldom has sore throat. No operations or injuries.

Catamenia: Began about 13 years ago; regular; occasional slight dysmenorrhea. Duration 5 days; last period November 25; no metrorrhagia or leukorrhea.

Family history: Father and mother living and well; 7 siblings living and well; 1 sister dead—cause unknown.

Physical examination: Moderately well developed and nourished adult, white, female lying in bed in obvious respiratory distress, coughing occasionally.

Thorax: Symmetrical, expansion slightly less at right base than left. Respirations rapid and labored.

Lungs: Anteriorly, B. S. and P. N. normal; posteriorly, from sixth rib downward on right and seventh rib downward on left, there is flatness, absent tactile fremitus and very much diminished breathing, tubular at right base. No râles.

Heart: Action very rapid; sounds of poor quality. Pulmonary second greater than aortic second. No murmurs.

Abdomen: No masses, spasms, tenderness or distension. Liver and spleen not palpable.

Reflexes: Negative. Blood pressure 110/80.

Diagnosis: Lobar pneumonia, both sides, in lower lobes, with very slight amount of fluid,

PROGRESS NOTES

December 13: Pulse rapid and looks very toxic.

December 15: Two days after admission, roentgenogram by Dr. William C. Wescott shows pneumonic consolidation, both lower lobes, with probable small amount of fluid.

December 17: Breath sounds come through more distinctly at left base; patient feels improved.

December 18: Respirations easier today and patient looks better. Breath sounds again very distinct at left base.

December 19: Complains of pains in right chest; no friction rub. No evidence of extension of pneumonic process. Condition seems slightly worse today.

December 21: Condition shows little change. Feels fairly comfortable and does not cough much. Temperature still runs to 102°.

December 23: Had not made any progress for several days. Roentgenogram of chest

yesterday showed essentially the same picture as before. Physical signs point to presence of fluid, and, in view of failure to improve, exploratory paracentesis was performed today. Thin pus was obtained from both sides and patient is going to be relieved by resort to surgery.

During acute illness temperature ranged from 99° to 102°; pulse 114 to 140; and respirations from 32 to 40.

December 24: Thoracotomy was performed on left side, under local anesthesia large quantity of yellow, creamy pus, about 350 c.c., obtained and then aspiration bottle was set up.

December 26: Patient much better, aspiration applied several times daily, bottle working well.

December 27: Same procedure performed on right side.

Improvement from this point was rapid and satisfactory, and she was discharged, cured, January 15, 1928, with a temperature of 98°, pulse 98, and respiration 20.

LABORATORY REPORTS

Urine: Essentially negative.

Blood: December 13, was normal except for 27,700 W. B. C. and 71% polymorphonuclears.

December 23: 27,600 white cells and 92% polymorphonuclears.

January 1: 13,000 whites and 68% polys.; hemoglobin 80% on admission is now 65% and R. B. C., which were 4,850,000 are now 3,470,000. Blood Wassermann, Kohlmer and Kahn negative; blood culture negative. Fluid from right and left thoracic cavities shows the following: Smear on December 27, 1927, "Numerous pus cells; large number of chains of Gram-positive cocci."

Culture: Gram-negative motile bacilli on further study proved to be *B. coli*.

Widal: *B. typhosis* agglutinated in 1:320 dilution.

TREATMENT

Light, soft diet during entire acute illness, and at subsidence of this stage, on December 24, soft diet. House diet on December 30.

Morphin sulphate gr. $\frac{1}{4}$ and atropin sulphate gr. 1/150 p. r. n., (a few doses were administered). Dovers' powders and aspirin 5

gr. when needed. Digalen 20 min. hypodermically every 4 hr. for 1 week; then *Tr. digitalis* 10 min. t. i. d. for the next 23 days, at which time need for it ceased.

COMMENTS

(1) Management of this case proceeded just as symptoms and signs directed.

(2) Dr. Thomas D. Taggart, hospital surgical chief, is entirely responsible for selection of the very simple, least shocking and least traumatizing procedure of thoracotomy.

(3) The Widal reaction was the result of a previous attack of typhoid fever.

(4) While pneumococcus, streptococcus and staphylococcus are the most common organisms in acute empyema, this case proved on culture to be due to the *Bacillus coli*.

(5) The lesions of typhoid 6 years previously may have been a factor in the appearance of *B. coli* in this empyema.

(6) The patient's family physician, Dr. P. S. Steelman, reported the patient in good health 3½ months after her discharge, and stated that medical attention had not been required since discharge from the hospital.

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Special Article

DIPHTHERIA IMMUNIZATION IN PRE-SCHOOL CHILDREN; A Plea to the Profession

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In spite of greater medical skill and effective means of diagnosis and treatment contributed by medical science, 100,000 children in the United States are reported yearly to be suffering from diphtheria or membranous croup—and the mortality is still 10%. After 35 years of existence of the specific—antitoxin—diphtheria still takes the lives of 10,000 children annually; so, the only conceivable hope of reducing this mortality lies in the prevention or eradication of the disease itself by wholesale immunization.

Much credit is due principals, teachers and school nurses for their enthusiasm, support and coöperation rendered to the campaign against diphtheria in school children. However, success in reducing diphtheria mortality or in eradicating the disease can be achieved only through an active campaign of education and publicity. Our duty as educators, physicians, nurses and health workers is threefold:

(1) To urge parents to call medical aid early in throat illness, as antitoxin used the first day reduces the mortality to less than 1%.

(2) To insist on immunization of pre-school children in early childhood—after the age of 9 months.

(3) To advise that school children be immunized during their first year in school.

To stimulate further interest in diphtheria prevention, circulars were distributed by Board of Education and Department of Health. Newspaper publicity, talks to parent-teachers' associations, motion pictures and posters by various health agencies were resorted to, all yielding gratifying results. An excellent pamphlet issued by the State Board of Health, in November, 1927, on methods and administration of toxin-antitoxin and Schick test, is available to all physicians for the asking. We are not by any means lacking facilities that may disseminate knowledge of health, and what is more we have found the public ready and willing to coöperate; with the result that over 50,000 Newark school children have

been tested in the past few years and, where necessary, immunized.

Immunization in larger cities is carried on in schools, clinics and by private physicians, and in rural districts by the State Board of Health. Diphtheria *can* be prevented by toxin-antitoxin and no further proof of its efficacy is required. It is hardly necessary to direct attention of physicians to the value of immunization against diphtheria, except to mention the result demonstrated by experience, namely that over 90% of children can be completely immunized without encountering any ill effects or severe reactions. The immunity produced is not only safe and effective but also of long duration; in our own experience it has lasted over a period of 4 years.

Let me urge that this preventive work should be developed as far as possible by private physicians, particularly among pre-school children. There seems to be a reluctance among physicians to the use of a new remedy until it has passed the experimental stage. At present, the use of toxin-antitoxin is universal and no longer experimental. Remember, one-third of all cases and two-thirds of diphtheria deaths occur in children of pre-school age; children who should have been protected through the family physician by toxin-antitoxin, which causes neither ill effects, unpleasant after-results nor rash. It is stated by our city health authorities that 52 diphtheria deaths last year occurred to children not one of whom had been protected by immunization. Who is responsible?

To further the work of diphtheria immunization, I feel it my duty to broadcast its importance among the pre-school group, since eradication of diphtheria in its entirety will depend largely upon the early immunization of every child of pre-school age. Parents by now are realizing its harmlessness and effectiveness, and are well under way to avail themselves of this protection for their young, embracing the opportunity if offered by the family physician.

At the present time prevention of diphtheria by immunization is not only more efficient than that of scarlet fever but also of greater necessity to the community and its indication decidedly more obvious. Let us compare for a moment the prevalence and mortality of both diseases as reported by this state for a given period, say January, 1928. We find 761 cases of diphtheria with 59 deaths, and 987 cases of scarlet fever with only 7 deaths, and I dare say that if scarlet fever antitoxin were as popular as diphtheria antitoxin, and used early in

the more severe cases, the mortality would have been still lower.

The degree of susceptibility to both diseases is practically the same in all children, as experience in testing has indicated, yet the notable danger in diphtheria is much greater. Remember, young children are rarely rendered immune by previous attacks of diphtheria except, possibly, where recovery took place without the use of antitoxin; in other words, an active immunity having been established, provided the child did not die in the attempt. Undoubtedly in pre-antitoxin days the chance for persistent immunity was greater, but the resulting complications in those who survived and the high mortality were appalling. Until the present day repeated attacks of scarlet fever have been rare, since all who recovered did so of their own accord by producing their own specific antibodies in sufficient amount. Passive immunity with antitoxin, whether in diphtheria or scarlet fever is of immediate benefit but transient or of short duration, and soon leaves the child susceptible to other attacks; clinical experience and Schick and Dick tests will bear this out. The best authorities advocate the use of scarlet fever antitoxin in severe cases only as recognized from the onset by the septic throat, hyperpyrexia, and intense rash, but doubt the wisdom of favoring its use in mild cases. In my own experience, the results when used early in the disease are often astonishing, the temperature subsiding to normal within 48 hours and the development of complications avoided.

Age and environment greatly influence susceptibility to contagion; recorded experience, clinical and by Schick test, teaches this fact. As to environment, densely populated sections afford greater opportunity for natural immunity because of increased prevalence and closer proximity of cases. Marked variations are observed in various sections depending upon density of population. Tests have disclosed variations ranging from 20 to 80%.

Influence of Age Upon Susceptibility

Age	Positive
4 years	4
5 "	18
6 "	26
7 "	23
8 "	28
9 "	15
10 "	12
11 "	4
12 "	3
13 "	3

258 Children Tested

Negative
1
4
18
17
27
20
12
8
9
6

Slight Influence of Sex Upon Susceptibility

Age	Positive		Negative	
	Male	Female	Male	Female
3 years	2	3	0	0
4 "	2	7	0	0
5 "	21	22	3	5
6 "	36	32	9	7
7 "	17	20	5	9
8 "	23	8	13	9
9 "	20	18	9	18
10 "	19	15	10	13
11 "	17	11	15	9
12 "	12	9	14	10
	169	148	78	80

Influence of Congestion on Immunity

	Enr'd	Test'd	Test'd	Im'ne	Im'ne
East Orange	8298	4660	56%	1283	28%
Newark—5 schools densely populated	7940	4936	62%	3764	77%

From 9 months to 3 years, practically all children, urban or suburban, are highly susceptible and every child in this group should therefore be immunized without the preliminary Schick test. From 3 to 5 years, at least 80% are still found susceptible, even those of thickly populated sections. Here, too, toxin-antitoxin should be given without the Schick test. Susceptibility in older children is reduced to about 40% depending, however, upon density of population. In this group, it would be advisable to determine the susceptibility by Schick test before immunizing. Greater inroads on diphtheria could be made if in the city its prevention could be confined to primary and pre-school children.

RECOMMENDATIONS

(1) A permanent record should be kept of all children immunized because it leaves no scar like vaccination.

(2) Children with known hypersensitivity to proteins, and those having previously received antitoxin, whether for prophylactic or curative purposes, should be inoculated with goat or sheep antitoxic serum or toxoids. The duration of the immunity of the latter has not yet been determined beyond 1½ years.

(3) The giving of a series of 3 doses of toxin-antitoxin does not prove that complete immunity has been established. Bear in mind the importance of giving a final Schick test, which should also be accompanied by a control as pseudo-reactions on retest are frequent, especially in older children.

(4) Be prepared for the occurrence of diphtheria subsequent to immunization in cases: (a) Shortly after administration, because active immunity has had no chance to

develop—it requires at least 3 months. (b) Incompletely immunized—where final Schick test was omitted. Remember you cannot immunize 100% of primary cases. A negative reaction after 6 months is the only ultimate test of immunity; otherwise, further treatment is necessary. (c) Supposedly Schick-negative—where test was performed with a nonpotent toxin (deterioration in dilution is very rapid even under refrigeration), or where protection from passive immunity persisted at time of testing. Remember, that proper technique and correct interpretation are also essential factors.

(5) The dose of toxin-antitoxin mixture is 1 c.c. which represents 1/10 L plus dose of toxin under-neutralized with antitoxin, according to U. S. Standard. The immunity treatment consists of 3 doses injected respectively at weekly intervals, preferably subcutaneously in the deltoid region of the left arm. The local reaction that follows is due to the toxin, as young children are rarely protein-sensitive. The general reaction is negligible except occasionally a slight rise of temperature.

In conclusion, let me emphasize again the great susceptibility to diphtheria in children of tender years with resulting high mortality; the efficaciousness of toxin-antitoxin as a preventive, with its freedom of untoward effects, especially in the young; and the increasing necessity and vital importance of early immunization for successful elimination of the disease. When diphtheria is eradicated, natural immunity, as in the case of smallpox, will cease to exist and immunization in early childhood will become as necessary as vaccination. By our united efforts, namely active coöperation of the family physician in pre-school prevention, with the present workable program of immunization in the schools, diphtheria will be absolutely eradicated within a few years, and like smallpox be relegated to diseases of the past. Let us adopt the motto "We Believe in Diphtheria Immunization" and the promise of stamping out diphtheria within the next 5 years will be definitely fulfilled.

COMMENT

(1) The high morbidity and mortality of diphtheria despite long existence of a specific remedy, necessitates abolishing the disease itself.

(2) The apparent great susceptibility and dangerous death rate, especially in the young, emphasize the importance of early active immunization.

(3) The efficacy of toxin-antitoxin and its freedom from after-effects has been proved, scientifically and clinically, beyond question.

(4) Complete eradication, the object of diphtheria prevention, depends entirely upon immunization of the pre-school child who can be reached by none better than by the private physician.

(5) In the interest of antidiphtheria propaganda and its anticipated benefits to child welfare, adopt the motto—"We Believe in Early Diphtheria Immunization".

Esthetics

WHY ARE YOU ON THIS EARTH?

(From "Kalends", Williams and Wilkins Co.)

Hardly a human being lives who has not wondered why he is here. When he has gotten most discouraged he has asked it most wonderingly. But you may be sure of this fact: You are here because there was some place here that was meant to be filled by you. And the only failure for you is that you do not face this fact and take your place.

It is true that you were not consulted about coming here; but neither was the flower nor tree nor bird, though each of these has always taken its place and brought beauty and usefulness wherever placed.

If you want to be happy you must get in line and keep step. If you are unhappy it is because you are out of line and out of step. People who do things are not troubled about why they are here. They know. They are glad that they are here and have the opportunity to show why.

There is no other joy comparable to that of work—especially if that work is an expression of the best that is in you. So it remains for you to find your place and then do your utmost to prove that the world needs you.

Do not think that the world owes you anything. You owe the world—and always will. It has given to you more than you can ever repay.

And never get the idea in your head that the world does not pay liberally for all that you give back. It gives you happiness in the first place and the opportunity to serve—the only excuse for life anyway.

You are here because you are needed. And you are needed today more than at any other time.

Medical Ethics

SUSTAINING A REPUTATION

(Reprinted from Kalends, Williams and Wilkins Co.)

The scrap heap of human flotsam and jetsam is largely composed of those who attained a certain measure of success and then lost all by yielding to the common fallacy that a goal attained is the end of the journey, instead of regarding the attainment of the goal as a momentary resting place for gathering strength for renewed efforts. The man who is so well pleased that he has "arrived", that he sits down to contemplate a life of ease, will soon find himself booted out of the way by men who have sufficient acumen to realize that a success achieved is but an opportunity to attain higher levels.

For those whose aim is to do good and lasting work there is no end to the effort to better what they already have accomplished. The first success, be one a tiller of the soil, a craftsman, or a scientist, is simply an indication that he has learned the use of the tools of his vocation. Should a little applause or well meant praise cause a man to believe that he is a master, then the chances are that his days of usefulness are nearly over. No matter how great the success of today may be, it provides no sure support for tomorrow unless buttressed by efforts as great as those which achieved the success of yesterday.

To rest upon one's past laurels is but an open confession that the end of one's abilities has been reached. The world of action and affairs turns quickly away from those who thus admit that they are done. To be content to rest upon the success of any task, whether great or small, is in itself an admission of lack of ability to perform a greater.

Medical Economics

PATHOLOGIC LABORATORY FEES ON FIXED SCALE

(From the Hackensack Hospital Bulletin, February, 1928)

The Advisory Committee, on January 6, 1928, voted to put into effect on February first the new regulations in regard to fixed pathologic laboratory fees as approved by the Medical Board.

Private	\$10
Semi-private	5
Ward	3

Exceptions are made in tonsil and obstetric cases and in one or two other instances.

This ruling will mean that every patient admitted to the hospital will be charged a fixed laboratory fee, which will include all the necessary laboratory tests that are required during the stay in the hospital. It does not include x-ray examinations.

This step, it is believed, will be of great benefit to the patients because hitherto physicians, always mindful of incurring additional bills for each laboratory analysis, have often foregone helpful tests in establishing diagnosis and aiding the course of recovery.

For example, it is thought that repeated urinalyses and blood counts will be ordered when advisable; that more blood chemistry tests are justified; that every case of pneumonia should be typed, as well as repeated sputum examinations where tuberculosis is suspected.

While this will doubtless double or triple the amount of work done by the laboratory, the physicians believe that it will be a splendid help both to the patients and to themselves.

In Lighter Vein

Hardly Worth It

Little Mary, who had fallen ill, begged for a kitten.

It was found that an operation was necessary for the child's cure, and that she must go to the hospital. Her mother promised that if she were very brave she should have the very finest kitten to be found.

As Mary was recovering from the influence of the anesthetic, the nurse heard her muttering:

"It's a rotten way to get a kitten."—Tit-bits (London).

Clock Needed a Little Help

A traveler staying at a small hotel was planning to catch an early train and, says the Hotel Record, asked the proprietress for the loan of an alarm clock. She produced the clock and remarked, "We don't often use it, sir, and sometimes it sticks, but if it doesn't work just touch that little hammer and it'll ring all right."—Boston Transcript.

The Careless Postmaster

Young wife—The postoffices are very careless sometimes.

Sympathetic friend—Yes, dear, why?

Young wife—Fred sent me a postcard yesterday from Philadelphia, where he is staying on business, and the silly postoffice people put an Atlantic City mark on it.—Washington Post.

True to Life

Mrs. Davis—Why did your husband make that dreadful face when he was giving his after-dinner speech?

Mrs. Howard—He always rehearsed it while he dressed. The part where he made the face came when he was putting his collar on.—Life.

Observations from the Lighthouse

OBSCURE EAR INFECTIONS IN INFANCY

A series of articles in recent numbers of State Society Journals, bearing upon the problem expressed in the above title, remind us of the slowness with which scientific knowledge is absorbed and made generally effective, and of the tendency to cyclical consideration of all subjects.

Several of these articles, referring to the frequency of autopsy disclosure of unsuspected infectious otitis media in infants, ascribe this discovery to investigations of very recent date; whereas, in fact, Ponfick, in Germany, and Meltzer, in New York, published complete and perfect accounts of the same findings more than a quarter of a century ago.

In 1911, in a text-book for medical students and general practitioners, (Reik: Diseases of the Ear, Nose and Throat, p. 42) speaking of the symptoms of aural infection, we said of "fever":

"This symptom alone will seldom demand an investigation of the ears except in very young children, but there it may be of the greatest significance. Every obscure febrile condition of childhood demands a careful examination of the ears. Infective processes in the middle ear are among the most common affections of young children, and they are very frequently entirely overlooked by the physician, simply because the infant is unable to explain the exact location of his trouble; the baby is in great distress and has a high temperature, perhaps 103° to 105°, and the physician fails to find a cause for the condition; the chest and abdomen are examined, the food supply is studied with great care, and the one organ which is perhaps the most frequent source of such a condition is neglected. If pus flows from the ear, after a period of suffering varying from 12 hours to 3 days, the diagnosis of purulent otitis media is finally made, but, though the pain has ceased and the fever subsided, the poor patient has, at the least, an injured sense organ in addition to his long suffering. Unfortunately, not all cases terminate even so favorably. The tympanic membrane may not rupture, and instead the pus finds its way through the tympanopharyngeal tube into the nasopharynx, and is either swallowed, to set up an enteritis, or travels down the respiratory tract to produce a bronchopneumonia. Ponfick and Meltzer, especially, have called attention to the frequency with which a purulent otitis media passes entirely unnoticed by the physician, and the child is treated for, or dies of, the terminal affection that resulted from neglect of the original disease. Further, otologists are constantly preaching of another group of serious lesions, the purulent invasion of the cerebral cavity that result from middle-ear infections. It cannot, therefore, be too strongly urged upon all physicians that a thorough *examination of the ears is required in every case of obscure febrile affection of infancy and early childhood.*"

In support of the above comes an interesting article by F. T. Hill (Jour. Maine Med. Assoc., April, 1928), in which he says:

"As a student in medical school, I must confess that I showed very little aptitude for the study of pediatrics. However, my professor, Dr. Morse, was in the habit of emphasizing, over and over again, one point which became firmly impressed upon my memory and which has been of inesti-

mable value to me ever since. This was, that in any case of unexplained fever in a child, always think of the ears and the kidneys. Since graduation, in a fairly active practice of otology, I have seen this maxim many times verified. Many times has the former of these, at least, proved to be the key to a diagnostic puzzle. All too frequently I have observed, when called in consultation, one or both of these important diagnostic points overlooked. This occurred even in my hospital days. An oft-recurring experience while house surgeon at the Massachusetts Eye and Ear infirmary was to find that, on returning to the hospital in the evening, some little patient in the nursery was reported as having a high temperature and crying with pain, but that my junior had seen the case and had ordered paregoric. Examination—and this meant looking at both ears—usually resulted in changing the order from paregoric to paracentesis of the ear drum. Far too often in private practice have I had to witness the tragedy of an infant dying from an otitic meningitis in which the otitis media had not been even suspected until too late.

The sick child usually presents a diagnostic problem, at best, unless, being lacking in a diagnostic conscience, one is content to attribute all the trouble to the gastro-intestinal tract and routinely apply the universal panacea, *Ol. ricini*, with blind hope and faith in its eventual efficacy. And yet what class of patients is more deserving of the best diagnostic ability than the helpless children? The adult, if mistreated, can change his physician, or at least register a complaint; but the infant is forced to suffer, if not in silence, at least in unintelligible vocalism. Most of the profession realize the necessity for otolaryngologic consultation in many cases of infant sickness, although sometimes this realization is not kept in mind and acted upon soon enough. That otitis media is a frequent disease of infancy is generally recognized, but that a primary infection in the tympanum, or mastoid, or in the paranasal sinuses, may cause marked systemic disturbance, to the seeming obliteration of the otolaryngologic picture, is not so well known.

Literature, at least that of fairly recent vintage, has been rich in references to this subject. Hartmann, in 1894, considered the question of intestinal disturbances in otitis media in infants. Post-mortem observations of Preysing, Ponfick and Heermann, in Germany, showed pathology and bacterial infection of the middle ear, and in many cases of the mastoid, in 90% of infants who died from any cause whatever.

Alden and Lyman found suppuration of the middle ear in 70 consecutive autopsies on infants dying from atresia and infantile diarrhea, only 20 of which had been diagnosed during life. Marriott called attention to the fact that in infants with diarrhea, fever and toxic symptoms there was not an intoxication due to some certain food element, but that it was a toxemia of infectious character. Autopsies on these cases showed no lesions in the gastro-intestinal tract, but purulent material with hemolytic streptococci were found in the mastoids in a large majority.

Of course in infants the history usually obtained from the parents is quite unreliable, and we should also remember that pain is not necessarily present in acute otitis. This erroneous idea, too prevalent with the family physician, is perhaps the greatest reason for overlooking many of these cases. Food refusal, malnutrition and loss of weight may be due to an otitis media, or

an infected sinus. In other words, *we must grasp the idea that in many of the disorders of infancy the disease is primarily in the ears, or sinuses, or both*, and that the gastro-intestinal symptoms are merely complications of this disease.

The general picture of the typical case is usually quite definite, although we may see many variations of this in practice in our localities. The onset is usually sudden. The infant is very ill. There is marked dehydration in a short space of time. There is a marked paleness, the lips are cyanotic and respiration may be difficult. There is marked loss of weight quite rapidly. There is usually a high fever, although this may be absent. There may be from 8 to 20 stools a day, and these are foul, green and slimy. There is food refusal, and often nausea and vomiting. White blood count will show from 10,000 to 40,000, with a high polymorphonuclear percentage. There is an appearance, described by Jean and Floyd, as one of intoxication, characterized by drowsiness or stupor, and grayish pallor, coming on with or following fever.

Sometimes we will find the typical picture of an acute otitis media on examination of the ears, with a red and bulging drumhead. Frequently, however, this textbook picture will be missing, and the condition can be diagnosed only with difficulty, requiring skill and experience."

Most Dangerous Period

Dudley Fournier (Southwestern Medicine, April 1928) says: "By far the most dangerous period for the ear during one's lifetime is that of infancy and childhood. Any physician who has the care of children should routinely examine their ears. The most frequent form of trouble is middle-ear disease. In very young infants, i. e., between the third and fourth month, the only symptom present may be fever. For this reason I want to emphasize the necessity for routine examination of the ears."

Duty of Family Physician

J. V. Treyner (Jour. Iowa State Med. Soc., March, 1928, 18:83) says: "The early recognition of otitis media is not the duty of the otologist but of the general practitioner or the pediatricist. I wish particularly to emphasize the fact that if the patient with otitis media is to be sent to the otologist in time to receive the most effective treatment his condition must be recognized early. Inasmuch as the diagnosis of otitis media can be made with certainty in but one way, that is, by direct examination of the eardrum, it behooves each of us to familiarize himself not only with the technic of examination, but with the varying aspect of an inflamed drum membrane.

If we are to realize the importance of otitis media, we must understand how frequently this condition is responsible for other conditions which seem to have no relation to the ear cavity nor even to the respiratory tract. We must likewise understand that otitis media may occur without any subjective symptoms referable to the ear. The younger our patient, the more frequently is this true.

Periodically, in our work with children, we encounter cases in which there is fever, not explainable until the ears are examined. The fact that there is no pain nor deafness is difficult to explain, but since paracentesis gives very definite relief there can be no question of wrong diagnosis."

Clinton A. Burrows, in a "review of otorhino-

laryngology, (California and Western Medicine, 28:509, April, 1928) says:

"Examination of the tympanic membrane ought to be a part of the routine examination of all young children. Every pediatrician and otologist has had the experience of having a child held for observation, or treated for various conditions, discharge unexpectedly an amount of pus from the ear, immediately followed by a decided improvement of all other symptoms. Otitis media is frequently met with not only in infants, but in children old enough to talk and tell their troubles. Many of us have seen abscessed ears where no pain was complained of. These facts serve to impress us with the necessity for routine otologic examination and with the fact that various symptoms referable to the nervous, respiratory and gastro-intestinal systems may be produced by acute purulent otitis media."

Lay Mirror Reflections

MEDICAL COSTS

(N. Y. Times, May 24, 1928)

Well named is the Committee on the High Cost of Medical Care. The burden has impoverished many. The cost of medical attention for ordinary ailments can be borne philosophically, but when pneumonia or typhoid strikes down a breadwinner or when a major surgical operation becomes necessary, poverty may soon knock at the door. The hospitals give free treatment to the poor. It is the middle class that suffers when surgeons and specialists have to be called in. It is estimated that 96.8% of those who work for a living in the state of New York have incomes of less than \$5000 a year. In states less favored industrially the maximum income would be less. The researches of the Committee on the High Cost of Medical Care and its recommendations will interest most of the people of the United States.

The problem is thus stated by the Chairman, Dr. Ray Lyman Wilbur: "How can a family of moderate means secure adequate scientific medical service at a cost which it can afford?" He calculates that illness costs the people of the United States \$5,000,000,000 a year. Some of the complaints of excessive medical charges are justified. Separate bills for hospital accommodations, the use of operation equipment, often come to more than the surgeon's fee. The 10% of income which many surgeons ask for a major operation is an embarrassing charge to the average middle class family. If one operation follows another or protracted disability must be paid for, its fortunes may be wrecked. Only the rich can avail themselves, as a rule, of the highest skill and the best equipment that modern medicine affords.

Hospital service is being steadily improved, and more and more is provision made in the interests of people of limited means. The Cornell Clinic in this city is a type of first-class treatment at very moderate cost. Health insurance materially lightens the burden of the middle classes. In 1900 the number of clinics and out-patient hospital departments was 150, while in 1925 it had grown to 5000. Industrial companies employing large numbers of people

are supplying medical and even hospital care on their premises without charge. Establishments that provide periodic examinations to prevent disease are helpful in reducing the sick rate. Health centers in the cities are doing a great work at low cost. The Rockefeller Foundation spent \$11,223,124 in 1927. Nevertheless, there is great need of the researches and surveys of the Committee on the High Cost of Medical Care.

DR. WILBUR SHOWS NEED OF MEDICAL CARE COST PROBE

(Newark Evening News, May 24, 1928)

Headed by a former President of the American Medical Association and made up of persons prominent in medicine and in other walks of life, the Committee on the Cost of Medical Care has been formed. It will direct a five-year investigation, the purpose of which is to discover how the best medical care can be brought within the means of the average family.

The committee's work will be widely watched. Nobody need be told that in the health crises of modern life cost bulks large. Dr. Ray Lyman Wilbur, chairman of the committee now formed under the aegis of a number of philanthropic organizations, estimates the national total at five billions. As much, he says, is invested in hospitals and equipment for the care of the sick, and a million persons are employed in various capacities in the same work.

Yet Dr. Wilbur, who can be presumed to know, says on the other side of the picture: "Physicians as a group are not earning adequate incomes, and, for many, hospitals and other facilities for scientific work are lacking. Nurses and dentists, too, fail to receive satisfactory returns for their labors. Apparently, it is the present system which is at fault."

In Dr. Wilbur's judgment, apparently, these things do not militate against the propriety of the complaint widely lodged against high medical charges. "I fear," he says, "some of them are justified. The cause of the difficulty, often, is the large number of separate bills which must be paid, not the amount of the physician's charge."

No further evidence is needed than this puzzling contradiction of facts, coming from such a source, to demonstrate that the new committee has a wide and fertile field of research.

MEN, ANIMALS AND PLANTS

(N. Y. Times, April 12, 1928)

Dr. Herty of the Chemical Foundation in an address in Washington last night called attention to the meager support given by the Federal Government to research studies relating to human health as compared with that voted for studying diseases of plants and animals. More than \$13,000,000 was expended last year in fighting plant diseases and pests and more than \$8,000,000 in combating diseases of animals. The pitiful sum of \$43,000 is asked this year—about the same as last—for the research department

of the Public Health Service, which has to do with human beings.

It is estimated by the Public Health authorities that practically 50,000,000 people suffered last year from colds and bronchitis; 17,000,000 from influenza and grippe; 11,000,000 from diseases of the digestive system; 8,000,000 from tonsillitis and sore throat and 5,000,000 from diseases of the nervous system, and so on through a long list of diseases which may be brought under control through intensive study. But the Government, while spending not too much for defense against the enemies of plants and animals, is spending virtually nothing for defense against what brings the greatest economic loss as well as the greatest discomfort to mankind. At present the conservation of the health of the nation is left almost entirely to private interests and to such spasmodic provision as the states or cities may make. It is time that the people as a whole gave attention to conditions with which even the most generous private foundations cannot cope and which in their ravages leap over city limits and state boundaries.

A bill has been introduced in the Senate by Senator Ransdell of Louisiana providing for the creation of a National Institute of Health within the Public Health Service for the specific purpose of setting a large group of scientists "to work uninterruptedly upon the fundamental causes of sickness, disease and premature death". It is proposed that \$2,000,000 a year be appropriated for a term of 5 years for the maintenance of a chemico-medical research laboratory. Even so we shall not be giving the health of men, women and children as much Governmental attention as we give to that of cattle, hogs, sheep, horses and plants.

Current Events

HOSPITALS OF NEW JERSEY

Through the courtesy of the Council on Medical Education and Hospitals, we are permitted to abstract and reprint a portion of the council's report for this year as published in the Journal of the American Medical Association, March 24. Of that report the Editor said: "This week The Journal presents the seventh annual compilation of statistics regarding hospital service in the United States. The information presented is based on the most complete return from all hospitals that has ever been secured in the hospital surveys. The figures have been carefully checked and are believed to be accurate."

We would like to reproduce entirely that section of the report which lists every hospital in New Jersey and tabulates the important facts about each, but as that list covers 2 pages of the larger Journal we can scarcely afford space for its duplication. Readers who may be sufficiently interested are referred to Jour. A. M. A., Mar. 24, 1928, page 953-4.

From 2 of the tables we abstract figures relating to New Jersey; one to show the different types of hospital, and the other to illustrate the operating control.

Type	Number of Institutions	Number of beds	Av. Number of patients
General	85	9932	6790
Nervous-Mental	19	12458	11380
Tuberculosis	15	2168	1669
Maternity	4	127	87
Industrial	1	25	16
Convalescent	12	791	561
Isolation	8	984	444
Children's	3	450	244
Eye, Ear, Nose and Throat	4	115	77
Orthopedic	5	261	179
Hospital departments of institutions	16	438	235
All others	5	261	176
Totals	177	28010	21858

As will be seen, the 85 general hospitals in the state have a capacity of 9932 beds and these have an average occupancy of 6790 patients; the percentage of occupancy being 68.4% as compared to 66% for all the general hospitals of the United States.

The second table indicates the character of ownership and control:

	Number of Hospitals	Number of beds	Av. Number of patients
Federal	4	122	43
State	16	8230	7781
County	20	6494	5324
City	12	2384	1756
City-County	1	20	7
Church	20	2820	1905
Fraternal	2	113	70
Industrial	1	25	16
Individual or partnership	21	576	341
Independent	80	7226	4615
Total government owned	53	17250	14911
Total nongovernmental	124	10760	6947
Grand total	177	28010	21858

Of all the hospitals in New Jersey, only 35 are approved for internships, by the Council, and 7 are approved for residencies in specialties; while there are 6 hospitals, with capacity of 174 beds, that were not admitted to the Register.

APPROVED CLINICAL LABORATORIES

"To the extent to which physicians have already discontinued sending their work to unqualified laboratories and are patronizing approved laboratories, progress has been made. Clinical pathology as a specialty of medicine is different from other specialties in one respect—it is one that may be assumed by nonmedical in-

dividuals. In this respect the special field of the clinical pathologist is not open to the inroads of nonmedical technicians, but has actually been entered by them.

In order to secure the best analyses for the benefit of their patients, as well as to conserve the interests of the medical profession, physicians should refuse to have their work done in laboratories conducted under the direction of nonmedical persons. For the convenient reference of physicians the complete list of accredited laboratories is printed on the following pages.

Any laboratories not yet on the list will be promptly considered for approval if they express such a desire."

New Jersey

Ashbury Park

Clinical Laboratory, Fitkin Bldg. C. A. Pons, Director.

Atlantic City

Laboratories, Atlantic City Hospital, S. Ohio Avenue, Robert A. Kilduffe, Director. (Does no basal metabolism nor electro-cardiographic work.)

Orange

Cline Laboratory, 264 Central Avenue. B. F. Cline, Director. (No blood chemistry. Wassermanns sent out.)

The Woman's Auxiliary

The Woman's Auxiliary to the American Medical Association published the first number of an official organ, "The Journal", in January, 1928. Among the many interesting articles, setting forth the history of this new organization and outlining its prospective work, none was more important nor more inspiring than the "Message from the Auxiliary President, Mrs. John O. McReynolds". We reproduce it here in full, that all members of our own county society auxiliaries may have the opportunity to profit by its reading:

"In presenting the New Year's issue of our Journal, I wish to extend to each individual Auxiliary member, as well as all the physicians' wives, whom we hope to enlist as members, my best wishes for a Happy, Healthy and Prosperous New Year.

And on behalf of the Woman's Auxiliary, I wish to extend our heartiest greetings to all members of the American Medical Association. We wish to express our profound appreciation of the generous words of endorsement we have received from so many of the officers and trustees and members of the House of Delegates, state editors and other leading medical men. Their unstinted encouragement will aid us tremendously in the continued development and expansion of our cause.

Without the recognition by the doctors themselves, it would be impossible to enlist the interest and enthusiastic support of the wives of the medical profession.

We do not aspire to any high position in scientific circles, nor space in the world's thought, further than to become one of the avenues of con-

veying the message of health as outlined by organized medicine. Not by individual effort, but rather by concerted and consecrated coöperation with the master minds of the healing art, must the complicated phases of our national health and welfare be preserved.

Our problems of health and sanitation are becoming less personal and more coöperative in their scope. We cannot expect to protect our families by building high walls around our homes, but we must seek defenses that spring from a community rich in the blessing of sane minds and sound bodies. We have come to realize that our surest safeguards are intelligent and courageous neighbors, and that we are indeed 'our brothers' keepers.'

The physicians of America have achieved marvelous results through scientific research and clinical experience. The avenues to the ideal method of living have been clearly outlined by the principles of preventive medicine and sanitation, but the people have, in a large measure, failed to hear or heed the admonition of those who know the truth. It is our golden opportunity to become messengers of the gospel of the healing art. We can become couriers in the campaign for better health, for all the people.

Our Auxiliary members are ready at all times to coöperate in carrying into execution the carefully matured purposes of the medical profession, to which we are individually and collectively bound by bonds most natural and enduring. A sympathetic and harmonious service to the doctor is the fundamental and essential feature of our work, and without this there would be no occasion for our existence as an organization.

We would urge every physician's wife to lend her influence to the Auxiliary in its endeavor to bring before other women of our country dependable knowledge and a just appreciation of the real spirit and purpose and actual achievements of the medical profession.

In every woman's club there are many members who are wives of physicians, and they are usually so efficient that they hold most important offices in their clubs. In one state, for instance, out of ten state presidents of Federated Women's Clubs, seven of them have been physicians' wives. There are three and one-half million women in America who are members of clubs—a number greater than the entire population of the United States (men, women and children), during Washington's administration.

Think how helpful the wives of physicians can be in developing authoritative health programs in their clubs, thus effectively impressing this large, intelligent and influential class of women concerning the rational measures for promoting the health of our people. Under the direction of our able medical advisers, we could outline a definite health program with moving pictures, emphasizing the importance of annual physical examinations on birthdays, etc. These programs could be presented before every club in every county of every state in the Union, the Auxiliary members in each county taking charge of the work. A portable moving picture machine, with films, would be the initial expense for each state. The Auxiliary could turn it over to the next county after operating the allotted time. This far-reaching movement toward health education, which we are fostering, is going forward with tremendous force, but with the full coöperation of all physicians' wives we could awaken the present

dormant interest of a misinformed public, and our message would take wings and fly all over the nation.

A large health foundation may grow out of the seeds we are sowing. It has been suggested that our Government may find it expedient to utilize our organization in distributing information pertaining to the preservation of health. Already, some of the other nations are thinking of organizing auxiliaries to their medical societies, and we hope to see the cementing influence of our auxiliary work encircle the earth with its bonds of altruistic service.

It is a tremendous task to persuade 120 million people to join this crusade for health. It means the mobilization of all the intelligent men and women of the Nation. Let us all join hands in this lofty enterprise. Let the physicians be the teachers, their wives the messengers, our press the promoters, our clubs the salesmen and our influential men and women the capitalists.

Let us build a paved highway to health and happiness. No doubt we will be charged with being dreamers, but history proves that "the onward march of science, religion and civilization has been led by Dreamers".

"Who dreams shall live, and if we do not dream,

Then we shall build no temples into time,
Yon dust cloud, whirling slow against the sun,

Was yesterday's cathedral, stirred to gold
By heedless footsteps of a passing world.

* * * *

"The crown he wore rots at a lily's root,

The rose unfurls her banner o'er his dust.

The dreamer dies, but never dies the dream,

Though death shall call the whirlwind to his aid,

Enlist men's passions; trick their hearts with hate,

Still shall the vision live. Say never more,

That dreams are fragile things, what else endures

Of all this broken world save only dreams."

—Dana Burnet.

GLEANINGS FROM THE WOMAN'S AUXILIARY

to the

American Medical Association
Minneapolis, June 11-15, 1928

Reported by Mrs. W. Blair Stewart, Atlantic City

Minneapolis and St. Paul are beautiful cities. The former, with its unusual hanging gardens around the tops of the electric light poles, and outside of the second floor windows of the department stores and other places, are boxes with beautiful flowers and hanging vines. These add an artistic touch which other cities might emulate.

Beautiful as these cities was the hospitality extended to the Woman's Auxiliary. There were dinners, teas and receptions; theatre parties, and days at their magnificent country clubs; and also drives by the "Waters of the Minnetonka", and by the Falls of Minnehaha—laughing water.

With all this pleasure was combined the Annual Meetings of the Auxiliary. Although we basked in the sun, and sat by the lakes, and

lunched at these magnificent country clubs, we had the days nearly filled with business of the Auxiliary. Mrs. J. O. McReynolds, of Dallas, Texas, our charming and most gracious national President, presided at most of the meetings. Texas was proud to own our fine stately President, for there was a large delegation present at the convention to tell of the auxiliary work being done in Texas.

One of these meetings was addressed by Dr. Jackson, the retiring President of the A. M. A., and by Dr. William S. Thayer, of Johns Hopkins Medical School, the newly inaugurated President, and also by Dr. McReynolds, the husband of our national auxiliary President. Dr. Thayer said that if the doctors had trouble to remember to attend the county medical societies, to have the secretary send the notices of the meetings to the wives of the doctors and ask them to "see that Bill gets there", and he will be there! Dr. Jackson said to the Auxiliary, "You women are different from all other club women, you represent but one profession". Also that doctors' wives should be good advertisers for the profession.

Among the activities gleaned from the reports of the presidents of the auxiliaries from the different states were: first and foremost, give strenuous work for the circulation of "Hygeia", a health magazine; see that it is on all doctors' waiting room tables, in hospitals, hotels and schools. One county has sent Hygeia to schools, rural and city, for 3 years. Give subscriptions of "Hygeia" as bridge prizes, or as gifts to your friends. Study medical legislation. We should oppose the bill introduced in Congress to take the place of the Sheppard-Towner Act, in providing for federal child welfare extension service; lay administration of funds to be spent in work in which only doctors are trained, is the chief point of opposition. The doctors have been giving their time gratis, under the Sheppard-Towner Act.

Other extracts culled from reports were: interest shown in crippled children; cooperation with Parent-Teacher Associations; study of local health machinery and local needs. Have health units, and child health congresses. Endeavor to have a health committee, and a health program in every club sometime during the year; and also health films in the moving picture theatres. The Auxiliary is working for a health film library in every state. These would be loaned to be shown in different parts of the state. Stress physiology being taught in the schools, and also physical examinations every year on your birthday anniversary.

The Minneapolis Auxiliary deserves great praise for the work done at the Auditorium lunch room. With a bare room to furnish, they secured—had loaned—steam tables, meat slicers, bread-cutters, and everything else needed in an up-to-date restaurant. They bought food at wholesale prices, and then 10% off, and of course made a financial success. There were thousands who there found good food. The work was stupendous.

The press reported that 2000 women had been registered. One paper stated that more than 600 members are attending the Woman's Auxiliary to the American Medical Association, which has units in 30 states, including a membership of 10,000 women.

On to Portland is the slogan for next year. The slogan for our state should be—Make New

Jersey 100% in county organization for next year. It only lacks one county now. Much enthusiasm in Minneapolis was shown over having a state so nearly entirely organized.

Mrs. Allen H. Bunce, of Atlanta, Georgia, was installed as President of the National Auxiliary, for this year. Mrs. George H. Hoxie, of Kansas City, was chosen as President-Elect for next year, and Mrs. McReynolds will still be on the Board. With these fine women steering our "ship of state", much should be accomplished, though we may have storms, and even cyclones.

The story was told how the California rooster found an ostrich egg, and rolled it home to the hens and said, "Ladies, I just brought this home to show you what others are doing". So the outstanding benefit derived from coming together from all over the state or from over the United States, is that we see and hear what others are doing. We have the broader vision.

Barrie has said, "God gives us memories, so that we may have roses in December". The memory of this fine get-together, and of the wonderful hospitality of the women of the Minneapolis Auxiliary will linger until we visit the City of Roses next year. On to Portland!

Bergen County

Reported by Mrs. F. C. McCormack

The regular monthly meeting of the Woman's Auxiliary of Bergen County was held on June 12, 1928, at the home of Mrs. Joseph Morrow, Bergen Pines.

An interesting report of the state convention was presented and was much appreciated by the members present. The President, Mrs. Edward Clarke, appointed committees for the coming year which promises to be one of great interest.

After routine business was finished the meeting adjourned to a bridge party held on the lawn.

Refreshments were served, prizes awarded, and all present voted the occasion a very delightful one.

Burlington County

Reported by Mrs. Elizabeth Ford Love

A meeting of the Woman's Auxiliary of the Burlington County Medical Society was held April 11, 1928, in the Moorestown Community House.

Mrs. Curtis, of Moorestown, acted as chairman in the absence of the officers.

The following were elected as the new officers: President, Mrs. R. E. Haldeman, Roebing; First Vice-President, Mrs. George T. Tracy, Beverly; Second Vice-President, Mrs. Howard Curtis, Moorestown; Secretary, Mrs. Wm. C. V. Wells, Delanco; Treasurer, Mrs. Harry L. Rogers, Riverton.

The following delegates to Atlantic City were appointed: Mrs. Downs; alternate, Mrs. Tracy. Mrs. Mulford; alternate, Mrs. Curtis. Mrs. Haldeman; alternate, Mrs. Newcombe.

After the business meeting, tea was served to the members, making a very delightful and informal closing.

Essex County

Reported by Mrs. George A. Rogers

The Essex County Auxiliary gave a card party on May 21 for the purpose of raising money for subscriptions to "Hygeia"; and also to contribute to some charitable work among young boys, undertaken by Dr. Ruth Hillyer, of the Parental Home in Newark. There are no community funds at her disposal, and after telling the Auxiliary at one of its regular meetings what possibilities there were of doing fine work if money were available, the members decided to do their bit in helping Dr. Hillyer.

Subscriptions to "Hygeia" will be placed in about 20 places through the money made at the card party.

A regular meeting was held May 28, 1928, when the nominations for the coming election in October were read.

Passaic County

Reported by Mrs. William A. Dwyer

The Woman's Auxiliary to the Passaic County Medical Society held its last meeting of the year on May 10, Mrs. Tuers, president, in the chair.

In the absence of Mrs. Dwyer, the minutes were read by Mrs. James P. Morrill.

A brief review of the year's work and pleasant associations formed in the Auxiliary was given by Mrs. Tuers.

Two book reviews were given:

Mrs. Orville Hagen, "Microbe Hunters" by DeKruif; Mrs. Elias Marsh, "Walter Reed and Yellow Fever", by Kelly.

At the close of this discussion the auxiliary was invited to hear a paper given by Dr. Royer, on "Sight Saving", to the county medical society.

Somerset County

Reported by Mrs. Lancelot Ely, Somerville

The Woman's Auxiliary to the Somerset County Medical Society held a meeting at the Civic League House, Somerville, on May 10. Routine business was transacted. Five new members were added, and enthusiastic plans made for the fall meetings. As delegates to the State Convention, there were appointed Mrs. Edgar Flint, of Raritan; Mrs. C. R. Kay, of Peapack; and Mrs. J. T. Robinson, of Bound Brook. As alternates, Mrs. A. Longstreet Stillwell, and Mrs. Lancelot Ely, of Somerville.

The Vice-President, Mrs. E. A. Brittain, presided. After the business meeting, the members spent an enjoyable afternoon at cards, the President, Mrs. Dan S. Renner, being hostess.

Sussex County

Reported by Dr. F. P. Wilbur

Members of Sussex County Medical Society, their wives, mothers and daughters and widows of deceased members attended a dinner Friday, May 25, at Pen-Y-Bryn Hotel in the Woodport

Road beyond Sparta. Mrs. E. C. Taneyhill, Assistant Educational Secretary of the State Medical Society, gave an address advising women to form an auxiliary to the Sussex County Medical Society.

Officers were elected as follows: President, Mrs. Bruno Hood, of Newton; Vice-President, Mrs. Robert R. White, Jr., of Franklin; Second Vice-President, Mrs. Blase Cole, of Newton; Secretary, Mrs. Thomas L. Pellett, of Hamburg, and Treasurer, Mrs. F. P. Wilbur, of Franklin.

Among those at the dinner were Dr. and Mrs. H. D. VanGaasbeek, of Sussex; Dr. and Mrs. Thomas L. Pellett, of Hamburg; Dr. and Mrs. F. P. Wilbur and Miss Caroline Wilbur, of Franklin; Mrs. Mary E. Burd, of Ogdensburg; Dr. and Mrs. F. H. Morrison, of Newton; Dr. and Mrs. Robert R. White, Jr., of Franklin; Dr. and Mrs. Blase Cole, of Newton; Dr. and Mrs. J. G. Coleman, of Hamburg, and Dr. and Mrs. Pooley, of Newton.

In addition to the officers named above, Mrs. Coleman and Mrs. Morrison were elected delegates to the state convention at Atlantic City.

County Society Reports

BERGEN COUNTY

Spencer T. Snedecor, Reporter

Bergen County has decided to promote ethical medical publicity. After careful consideration of the report of the special committee, consisting of Drs. Donald A. Curtis and Harry B. Wolowitz, the society accepted the report and passed a resolution appointing a Committee on Public Relations with an appropriation of \$1000 to spend on publicity this coming year. The report of this committee is of special interest to all members of the profession and is herewith printed in full:

Report of Committee on Publicity

This committee has investigated the question of publicity by the society and has come to the following conclusions:

(1) That a properly conducted campaign of ethical publicity sponsored by this society is most desirable as a means of clarifying the relationship between the physician and the public; of stimulating interest in matters medical; of educating the public in the prevention and early recognition of certain diseases; and of opposing the cultists.

(2) That such publicity must be of 2 types, direct and indirect. The direct method means the insertion of material in certain publications by paying for space. The indirect method calls for free publication of articles of public interest and for public benefit. All material is to be released under the name of the Bergen County Medical Society.

(3) As for direct publicity, the cost can be nominal at first and increased later if it is found desirable to widen the scope of our publicity. For example, the Bergen Evening Record charges 63 cents an inch per day. For an "ad" 2 columns wide by 6 inches high the cost is \$7.56 a day. If such an "ad" were inserted twice a week the

annual expense would be \$786.24. However, by contracting for a certain space to be used at stated times this cost can be decreased a little. Furthermore, the copy will be written by The Record without additional charge. If it is preferred to have a professional copywriter do the work an additional expense of 20% of the advertising cost must be included.

(4) That there is a wealth of material for indirect publicity which is easily accessible. The State Society Journal; the Antituberculosis, Anticancer, and Red Cross Societies all have interesting copy that they are glad to furnish without charge. In addition, members can help by submitting short articles on various medical subjects.

This committee therefore recommends that:

(a) An active campaign of ethical publicity be embarked upon by this society as soon as possible.

(b) A publication committee be appointed with power to go ahead and make all arrangements and contracts for such a campaign. It is suggested that this committee consist of men who have had previous experience in work of this sort, and that they be preferably volunteers.

(c) Direct publicity be published in one or more daily papers of wide circulation in the county at least once or twice a week, and that articles for indirect publicity be presented 3 times a week.

Memorial to Dr. Beveridge

On Memorial Day the Schoonmaker Post of the American Legion at Teaneck held memorial services in front of the Court House in honor of Dr. Beveridge, who was First Post-Surgeon and a former member of this society. Dr. Beveridge was gassed during his war service in France and his early death, a little over a year ago, was a result of this disability.

Mrs. Beveridge unveiled the memorial tablet. Dr. Herman Trossbach represented the Bergen County Medical Society at the services.

Work of Dr. Payne, County Physician, Endorsed

Reporting for the special committee, Dr. John V. Lynn presented the following resolution which was passed by the society:

In view of persistent and unwarranted criticisms of Dr. Joseph R. Payne, and after intimate and accurate information obtained about the charges, the society feels that these criticisms are unwarranted and a perversion of the facts. The society further deplors this unjust and unfair criticism and expresses confidence in Doctor Payne as a professional man and a public official.

Dr. F. C. Young of Westwood was accepted to membership by transfer.

Report of State Society Meeting

Several of the delegates were called upon to give their impressions of the State Society Meeting.

Dr. S. T. Snedecor related the message of Dr. Hammond, Editor of the Pennsylvania State Medical Society Journal, to the Secretaries and Reporters at Dr. Conaway's luncheon. Emphasizing Dr. Hammond's remarks that discussion and divided opinion were essential for a lively

meeting, Doctor Snedecor urged that a greater effort be made next year to have all of the Bergen County delegates present to promote the proper representation of Bergen County among the officers and committees. He also urged that they take a larger part in the scientific program.

The state meeting was also discussed by Doctors Gilady, Spiegelglass, Corn and Hallett.

BURLINGTON COUNTY

Roscius I. Downs, M.D., Reporter

A regular meeting of the Burlington County Medical Society was held Wednesday, June 13, 1928, at the Burlington County Hospital, Mount Holly, N. J. The Vice-President, Dr. Harry Bauer, in the absence of the President called the meeting to order at 1:30 p. m. There were 21 members and guests present. The minutes of the previous meeting were read and approved.

Dr. Paul M. Champlin of Maple Shade, N. J., was unanimously elected to membership in the society.

Dr. Conroy, chairman of a committee to arrange for an increase in the number of meetings of the county society, suggested 6 meetings a year. He proposed that section 2 of chapter II, of the Constitution be changed to read: "The regular meetings of this society shall be held on the second Wednesday of January, March, May, July, September and November at such time and place as may be designated at the previous meeting." This change will be voted on at the next regular meeting. Dr. Rogers suggested that meetings called at 2:30 p. m. with dinner at 5 p. m. would be more convenient to the members.

The committee composed of Drs. Joseph Stokes, Marcy and Newcombe, to arrange a fitting celebration in honor of the One Hundredth Anniversary of the society, reported progress.

Drs. Conroy, Mulford and Stokes were appointed to prepare resolutions on the death of Dr. A. L. Gordon.

The secretary read a letter addressed to the Burlington County Medical Society from the Visiting Nurses' Society of Riverton, Palmyra and Cinnaminson, New Jersey, containing 2 requests: That the Burlington County Medical Society name a small committee of doctors to act in an advisory capacity for their nurses to whom they could go for council and advice; that the committee sign copies of "Standard Orders" for nurses, enclosed.

The above letter followed the suggestion of the Supervisor of the Red Cross Town and County Nursing Service.

Drs. Rogers, Lore and Bauer were appointed to report on this subject at the next meeting.

The scientific program followed. Dr. Edgar J. Haines, Chairman of the Section on Gynecology and Pediatrics, presented the following:

"Diagnosis of the Acute Conditions of the Lower Abdomen", by Thomas B. Lee, M. D., Camden, New Jersey. "Pyloric Stenosis in Infants", by E. G. Hummell, M. D., Camden, New Jersey.

Dr. Lee first commented on the splendid and well equipped new hospital building. Under his subject, he discussed ruptured ectopic pregnancy and differential diagnosis of acute appendicitis and acute right salpingitis. Ruptured ectopic pregnancy presents a most dramatic picture. It

is often caused by a mild pelvic inflammation, as the mucous membrane impedes progress of the ovum. A congenital condition with the presence of microscopic diverticuli and prodigious growth of fetal tissue retard the progress of the ovum. Symptoms depend on the pathology present. The ovum may be arrested in the outer-third of the tube or infundibulum, the middle-third, or the tube in the body of the uterus, or the ovum may pass through the tubal end into the cul-de-sac. The latter condition often recovers undiagnosed. The rupture may appear in the peritoneal cavity producing a profound shock, or in the broad ligament, a slower process. The presence of an old chronic inflammation makes the diagnosis more difficult. Shock with a rise of leukocytes is characteristic. The leukocytes rise to 12,000 or 15,000 with hemorrhage and subside in 24 hours. The sedimentation test has not proved as satisfactory as was expected. The hemoglobin is low in an ectopic and not in an acute salpingitis. When aspirating the cul-de-sac make sure a retroverted uterus is not present. Often it is better to ligate the opposite tube to prevent a future ectopic pregnancy.

Dr. Lee treats most cases of incomplete abortion by letting them alone. However, if the temperature is up and the cervix is open after 5 or 6 days he does a dilatation and evacuation with placental forceps.

Dr. Hummell then read an exceedingly interesting and instructive paper on his subject, "Pyloric Stenosis in Infants". (This will appear in full in a later Journal).

After a rising vote of thanks to Drs. Lee and Hummell for their fine program, the meeting closed to meet at the hospital again in October.

MORRIS COUNTY

Marcus A. Curry, M.D., Reporter

The regular quarterly meeting of the Morris County Medical Society was held in Dover, at the Dover General Hospital, the evening of Tuesday, June 12, upon invitation of the management of that new hospital unit in Morris County.

In the absence of President Haven, who was attending graduation exercises of his son and daughter, Vice-President Mial presided, with an attendance of about 35 members and guests.

President Jardine, of the Board of Trustees of the Dover Hospital, welcomed the society in a very apt address, saying:

"Mr. President and members of the Morris County Medical Society: It is a great pleasure as well as a privilege to welcome you to our new buildings. Our staff is honored by your accepting the invitation to meet with us here. I trust you will spend a pleasant and profitable evening and feel repaid for having been with us.

"I have recently learned some interesting things concerning the county medical organization, as well as more of the doings of the staff of this institution. It am told that a person must be a member of the county society to be eligible for membership on the staff of this hospital. This certainly makes our staff of more value to us, from the connection with your society; and I am also glad to know that any member of the county medical society has the right and privilege, through the courtesy of our staff, to care for his patients brought to this institution. We

wish to cooperate in every way; they can be helpful to us and we can be helpful to them.

Morristown was very kind to us in our infancy, not only to hospitals but the staffs of the institutions. While we are still the infant in the county we believe we can and will grow to be an honor and credit to the county. The Board of Trustees of this institution, of which I am the representative, are proud of our staff and their cooperation with us, of what they have attempted to do and have done for us; the advice they have so often tendered to us in connection with the work we are attempting to do. The staff of this hospital aren't in the class with the story I heard told of a nigger boy in the South. He was given a trouncing by his teacher and the teacher followed it up by going to the home and reporting to the mother. The mother said, 'Yes, I know he's lazy, he doesn't know anything and never will know anything'. She called the boy everything she could think of and ended by saying, 'I'm mighty glad I didn't marry that man'."

Continuing, President Jardine said: "I want you to realize that we feel honored as well as our staff by your presence here; and we want our staff to feel at liberty to use these buildings for your meetings as often as they can secure your presence. I trust you will take just a little time to inspect the buildings; I know the staff will be delighted to show you what we have and what we are trying to do".

Routine business was transacted and various subjects of interest to the society were reported on. Frank G. Heinig, of Boonton, was unanimously elected to membership.

Dr. Marie Gregory, of Madison, was proposed for membership; the application being referred to the Committee on Credentials.

Chairman Curry, of the Nominating Committee, presented the committee's recommendation of officers for next year, to be voted on at the annual meeting in September, as follows: President, L. L. Mial; Vice-President, Lawrence M. Collins; Treasurer, F. Grendon Reed; Secretary, George H. Lathrope; Reporter, Marcus A. Curry; Historian, Henry W. Kice; Additional members of the Executive Committee, Samuel C. Haven, William A. McMurtry, Edward T. Carberry; Delegates to the Annual State Meeting 1929, William F. Costello, George B. Emory, L. E. Williams; Alternate Delegates, Chas. B. Gordon, Thomas S. Thomas and Fred E. Knowles.

Dr. McMahon reported for the Library Committee, outlining the periodicals available, which are well placed in the Morristown Library for convenient reference and reading; he understood that a number of lay people came in and made use of them but he didn't think very many of the members used them.

Dr. Lathrope reviewed the preliminary steps taken toward the organization of the Woman's Auxiliary; stressing that when this was finally brought up for action there were 25 members present at this special meeting, despite the very bad weather conditions; that 17 voted to have this Woman's Auxiliary; so we went ahead and got in touch with Dr. Reik who, after more or less trouble, arranged to release a day when he could come and talk to the women; that as secretary he sent out notices to every member and when the meeting came there were exactly 4 women there and there wasn't a single wife of the members who voted for this auxiliary; describing the organization with Mrs. McMahon

temporary president and Mrs. Gilbertson, secretary; the painstaking work they did to hold a meeting and when Mrs. Taneyhill came away up here from Atlantic City to address the meeting there were 5 or 6 present. Dr. Lathrope's outstanding point was that after voting to have the auxiliary he didn't see why the members didn't have enough influence with the rest of their families to have them come out and take an interest; that he was simply reviewing the situation to have the members use their influence at home to have this organization encouraged.

Dr. Costello, as one of the delegates to the state meeting, made a graphic report of important incidents and emphasized that it was conceded to be one of the most successful ever held, with a registration of 1010; that it was the first time we had members on the program; 5 men reading papers at the state meeting; the first time recognized in such large numbers; the papers were all well received; the attendance from the county was very good; also explaining the proposed new constitutional methods of electing the Board of Trustees; that there will be no more permanent delegates; that delegates will be elected pro rata depending upon the membership of the different component societies; they will be elected for 3 years and simply be called "delegates".

The scientific section of the meeting was of unusual interest, being a program of Clinical Reports: (1) Sarcoma of Mediastinum, Dr. Young; (2) Pylorospasm in a Young Infant, Dr. Krauss; (3) Carcinoma of Lung Metastasizing from the Prostate, Dr. Rice; (4) Sacculated Empyema, Dr. Rice.

The papers were presented in familiar style with conversational explanations of different points which added to their intrinsic interest and were elucidated by the exhibition of roentgenograms. Put on as an experiment the interest manifested will doubtless place this type of meeting in the category of permanent fixtures of the society's activities. (The papers have been promised for publication in full in the Journal.)

The routine and scientific sections of the meeting being over, the members and guests joined in an inspection of the hospital plant, the hospital proper and the nurses' home. Everything was found to be adequate and most modern in every way, with a patient capacity of 64, and manifested everywhere was the trend of the times to get away from the cold and severe, and to approach the warm and homelike; the rooms being done in different colors with furnishings to harmonize and with not a white piece of furniture to be seen anywhere. One does not have to look far into the future to see the day when the institution will be everything that is so enthusiastically and confidently claimed for it by the physicians and laymen who have labored so hard to bring this model plant into being, and who are still gallantly carrying on to have the institution realize their highest aims and ambitions. Ideally located with good elevation and with a sweeping view of surrounding wooded hills, and being a credit and asset to the town and county established beyond peradventure.

After the complete inspection, an excellent supper was provided by the hospital and greatly enjoyed by its partakers.

The annual meeting of the society, in September, will be held at the State Hospital at Greyone Park, a long established custom, by invitation of the Board of Managers and Superintendent Curry.

SOMERSET COUNTY

Lancelot Ely, M.D., Reporter

The Somerset County Medical Society and the Clinical Society of the Somerset Hospital held a joint meeting Thursday evening, June 14, in the Nurses' Home adjoining the Hospital. The Rutgers Medical Club and the nurses of the hospital were guests.

John Rodgers, M.D., Professor of Endocrinology, Cornell University, gave a talk on "Abnormalities of the Thyroid". He called attention to the amount of work that has been done experimentally and through research, and it is his opinion that we are just at the beginning of our real knowledge of the thyroid—its function in health and disturbance in disease. He classified diseased thyroids into hypothyroid and hyperthyroid divisions. He believes that the thyroid gland aids in the production of energy and that the patient who lacks energy, is easily tired or soon fatigued comes under the hypothyroid class. The cause may be traced to infection, or to exhaustion from overwork or worry, or to a family inheritance. The hyperthyroid he considers an advanced state of hypothyroidism. There is also a mixed type which shows symptoms of both. A toxic adenoma may start as a hypothyroid. Exophthalmic goiter is a serious state of thyroid disease. Certain types of neuroses, pain around the mouth and throat, not diagnosed, or disturbance in the gastro-intestinal tract in the neurotic patient, not diagnosed, may be symptoms of hypothyroidism. Under treatment, Dr. Rodgers mentioned the use and abuse of iodine and of glandular products, both useful after a proper diagnosis had been made. X-rays are valuable in some cases, and also operation, but operation for thyroid disturbance should be done with extreme caution and only in cases that have been under observation for some time. Sleep and rest is the most valuable treatment in many cases. He called attention to the growing child who shows vague symptoms of nervousness, possibly overworked in school or at home, or one living under strenuous home conditions, as a possible hypothyroid case.

All present received a great deal of helpful information in diagnosis and treatment of these cases. During an active discussion, Dr. Rodgers answered many questions.

At the close of the meeting a social hour was enjoyed and the nurses of the hospital served refreshments.

To A Gregarious Soda Jerker

(Having always disliked the appellation "Doc", we endorse this sentiment.—Ed.)

Soda Jerker with the ruddy
 Cheeks and little silken cap,
 You can call me "bo" or "Buddy,"
 "Feller," "Brother" or "Old Chap"
 But I'm going to sock a rock
 Hard against your lofty crock
 Every time you dub me "Doc."
 If you call me "friend", no danger
 Will surround the Mineralava
 On your face. Ask "What's yours,
 stranger?"
 And I'll answer, "Cup of Java."
 Lest you'd have me run amok
 And your finer feelings shock
 Quit the question: "What's yours, Doc?"

—Arthur L. Lippmann, in Judge.

Special Announcement

COST OF MEDICAL CARE

As our members have seen references in the daily papers to the investigation being conducted they may be interested in the following abstract of a letter received from Dr. Wilbur, explaining what the investigating committee is attempting.

"The committee was organized in May, 1927, at a conference called by 10 physicians (3 of whom are in private practice), 3 economists and 3 non-medical persons engaged in public health work, and attended by approximately 60 persons representing these three fields and the general public.

While the committee was small at first, it is now composed of 42 persons—14 private practitioners of medicine, 6 men engaged in public health work, 8 persons employed by various institutions and organizations, 5 economists, and 9 persons prominently associated with public welfare enterprises. In the entire committee there are 23 persons with the degree of Doctor of Medicine,—such a large proportion that the committee has been charged with being a medical agency disguised by the addition of a few outsiders, which has been organized to 'put some thing over on the public'.

The study is not an investigation of the charges made by the 140,000 physicians engaged in private practice. It is a study of all kinds of medical care as rendered by 1,000,000 persons employed in various capacities on a whole-time basis, in office or home, or (in an increasing proportion of cases) in medical institutions now capitalized at approximately \$5,000,000,000.

The committee will deal not only with the cost to the people of hospital care, nursing, dentistry, drugs, physiotherapy, surgery, and other medical services, but with various problems involved in the prevention and cure of disease. The demand for medical services and their supply and distribution is the subject of a preliminary survey. The major group of studies deals not only with the cost to the family, but also with the return accruing to the physician, the nurse, the dentist and other agents furnishing such services. A third group of studies consists of an analysis of industrial medical services and other organized facilities now serving particular groups of the population.

The American Medical Association is to conduct a study on the income of physicians. The United States Public Health Service and the Metropolitan Life Insurance Company have already begun other studies. It is hoped that the American Dental Association will also participate.

My association with the members of the committee has convinced me that the general committee, the executive committee and the research staff are approaching the difficult task before them without preconceived ideas of what the solutions of the problem will be. Their single purpose is fact finding.

I believe we have proceeded along right lines. It is well, I am convinced, that the committee is responsible to no previously established organization, but only to the general public; for the prevention and cure of disease is a matter in which the public interest is paramount.

In 1922, the Journal of the Michigan State Medical Society discussed the dissatisfaction of the public with the existing situation in medicine. It stated:

"The tendency of the day is that when any group of citizens cannot afford to purchase certain privileges, services or needed comforts the demand goes forth that the state supply to them that which they cannot now obtain. The state and county usually comply with the pressing demand of its citizens. We are fearful that we are on the eve of such a demand from the people. What are you going to do about it?"

The same year the President of the Ohio State Medical Association made a similar statement and asked a similar question.

During the past decade or two, there have been other warnings and questions, like these, but no effort has been made by medical organizations to meet the problem. It was not reasonable to expect them to do so. Private practitioners are absorbed in the technic of treatment. It is extremely difficult for them to see the problem as a whole. The points of view of public health and economics, combined with the point of view of private practice, are needed. These are all found in the Committee on the Cost of Medical Care.

The interests of the private practitioner will be adequately represented and safeguarded as the work of the committee develops. The 14 distinguished practitioners on the committee, several of them prominently connected with the American Medical Association and its constituent organizations, are actively participating in the deliberations of the committee."

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PRESIDENTIAL ADDRESS

WALT P. CONAWAY, M.D.,
Atlantic City

I would be most ungrateful if I did not first express my appreciation of the very great honor you conferred upon me in electing me your presiding officer for the past year. Having been invited by my predecessor to sit in with the other officers on several occasions, I was in a slight measure prepared for the duties of this high office. On this occasion, instead of inflicting upon you an attempt at a highly scientific paper, I will review very briefly the work of our Society in so far as I have been privileged to participate in it.

Of the many and varied activities, none has been more important than furtherance of the antidiphtheria campaign. Each of our societies adopted a resolution endorsing this movement, and at every opportunity I have stressed the important part the family physician should play in completing a thorough immunization of all children against this dread disease.

I regret very much that I am unable to report an increased interest on the part of our members in the propaganda for periodic health examinations. So far as I am able to judge, it is only wasting time to even mention the importance of this work to New Jersey doctors. It is my firm belief that there is an increasing demand from the public for a regular and thorough physical examination and if the family physician is not at all interested,

then the examination will be made by the various life extension institutes, and the doctor loses.

I am happy to report that no adverse medical legislation was enacted at the last meeting of our legislature. There were a few bills which are worthy of comment, only because they were reported favorably by the very sympathetic House, but they were promptly defeated in the Senate. A bill to make a profession of so-called "cosmetology" and thus glorify the beauty parlors; a special bill to legally usher one blind gentleman into the mysteries of chiropractic adjustment, and another to qualify osteopaths as physicians and surgeons, were defeated. It does seem that a further development of conscience is influencing our legislators more favorably toward proper health measures.

The work of the Committee on Insurance, Dr. Pinneo, Chairman, has been very creditable. Automobile insurance has been added to our list, but notwithstanding the attractive rates only a relatively small number of our members have accepted the policies offered. It may be that lack of familiarity with the excellent plan of insurance offered by our Society is the reason why so many members are willing to assume the personal liability of having little or no insurance.

The annual registration of physicians, which was approved by the House of Delegates last year, was recommended to each of the county societies. All except 2 or 3 counties in North Jersey approved, but since we could not present a united front to the legislature encouraging a bill for this purpose, it was deemed

advisable to postpone any further action. I feel that the annual registration of physicians is a step in the right direction and that its advantages far outweigh its trifling disadvantages.

It has been my privilege and pleasure to attend a meeting of each of the 21 county societies. These meetings were fairly well attended and the programs for the most part were very interesting and instructive. However, I think the county society meetings would be improved by arranging for an occasional clinic day, when the meeting could be held in a hospital. May I suggest that one meeting during each year be devoted entirely to the subject of medical economics? I think our State Society officers have here an excellent opportunity to be of great service, especially to the smaller county societies. Why could we not consider ourselves as an advisory committee and assist the county society officers in securing talent for their meetings? Why could not neighboring county societies hold a joint meeting with a program arranged through cooperation of the State Society officers? I noticed that in many counties very few of the local men took any part whatsoever in the program. At one of the regular meetings in Camden County and also in Morris County a symposium was prepared entirely by the local men and was indeed very interesting. I would suggest that more local talent be utilized at each meeting, if only to read case reports or exhibit an unusual case or take part in discussion. These suggestions are offered as constructive criticism and I hope they will be accepted as such.

Our Welfare Committee has been functioning properly and most harmoniously under the Chairmanship of Dr. Andrew F. McBride. All matters brought before this committee have been considered and disposed of promptly and in good order.

I have especially enjoyed attending and participating in the meetings of the Tristate Medical Conference. As you probably know, this Conference is an unofficial body whose recommendations are merely reported to their respective state societies for consideration and for adoption or rejection. Four meetings have

been held during the year. At the first meeting "Medical Publicity" and "Diphtheria Immunization" were considered. Medical publicity was discussed largely on account of the present wide-spread activity of certain official and voluntary lay agencies in promoting public health propaganda. It was thought that because physicians as a rule are not desirous of publicity, the public should not be misled into assuming they had no especial interest in public health problems. Such an important matter to the public as diphtheria immunization was given a decided impetus as a result of this first meeting.

At the second meeting, which was held in this city, a paper dealing with the "Control of Private Hospitals" was read by our Secretary, Dr. Morrison, and this matter was thoroughly discussed. You are doubtless familiar with the fact that the American College of Surgeons and the American Medical Association provide for an inspection of only the larger hospitals and no one except the individuals in charge, or the owner, has any control whatsoever over the smaller institutions. As a result of our meeting, a committee from our own society held a conference with Commissioner Ellis of the Department of Institutions and Agencies at Trenton and succeeded in having our present law for the control of hospitals amended to suit, in a great measure, the wishes of this Committee. We feel that in this particular instance something was gained for the public good.

At our third meeting, held in New York City, the matter of "Medical Expert Testimony" was considered. A very excellent paper on this subject was read by Mr. Lloyd Paul Stryker, counsel for the Medical Society of New York. Each one present took part in the discussion. A motion was unanimously carried that a committee consisting of one physician and one lawyer from each state be appointed by the President of each Society to draft a bill aiming to correct the present evils, which would be submitted to their respective legislators, subject to the approval of the officers of the medical societies.

At the fourth meeting, which was held in Philadelphia last week, "Administering the

Medical Laws" was the topic for discussion. The essayist on this occasion was Dr. I. D. Metzger, President of the Pennsylvania State Board of Medical Education and Licensure. His paper covered the subject very completely and served to clarify many points which have recently been the subject of considerable discussion, especially among the members of the Examining Board of our own state. Dr. James Sullivan, Assistant Commissioner for Higher and Professional Education, of Albany, opened the discussion, in which representatives of the Medical Societies of New York, New Jersey and Pennsylvania joined. Our State Board of Medical Examiners was represented by the President, Dr. A. W. Belting, and the Secretary, Dr. Charles B. Kelley.

The increasingly rapid development of so many kinds of work for our Society justifies the thought that the time has come when we should seriously consider the establishment of some central headquarters, or preferably a permanent home. The Medical Society of Pennsylvania points with just pride to its new home, and several of the county societies in that illustrious commonwealth have secured very creditable permanent headquarters. This seems a most commendable ambition for our own Society to emulate and I am very glad that the Committee appointed from our Society for this purpose has been more active during the past year.

Physicians in the past have been notoriously individualistic, but in recent years developments in the field of public health and preventive medicine prove conclusively that we must assume new responsibilities. Lay organizations should assist us in many of these duties, but in every instance we should assume the guidance and leadership, and at the same time cooperate with and utilize the various health agencies on account of the valuable service they can and are rendering to the public. It seems to me that we should devote some of our efforts toward the correlation of the medical work of lay organizations with that of the family physician.

Through the courtesy of station WPG, Atlantic City, regular weekly programs have been broadcast by some of our members, and such

important subjects as "The Prevention of Colds", "Common Eye Troubles of Middle Age", "Your Child's Eyes", "Let's Live Longer", "It May Be Your Teeth", "The Story of Diphtheria Prevention", "A Mental Inoculation", "The Cancer Problem", and "The Prevention of Diabetes and Its Surgical Complications", have been presented. It cannot be doubted that these talks have been appreciated by many listeners in this and other states and even in foreign countries, for many complimentary letters have been received regarding these programs. I recommend that this combined radio and newspaper program be continued as an essential part of our educational campaign.

I was very happy to sponsor a testimonial dinner to our most faithful and deserving Recording Secretary, Dr. Morrison. Those who shared in this enjoyable occasion, I am quite sure will agree that it was an event not soon to be forgotten, and afforded us equally as much pleasure as it seemed to give our guest. I am a firm believer in showing proper appreciation of faithful services rendered by any of our brethren while they too can enjoy it, and I sincerely trust that my successors will deem it wise and expedient to do likewise.

It became my very pleasant duty to attend 6 banquets, several out-of-town committee meetings, 2 nurses' graduation exercises, a few sessions of the Legislature, 4 meetings of the Tristate Conference and 28 county society meetings. It was my very sad duty to attend 2 funerals—those of Walter Glendon, of Bridgeton, and Dr. Randolph Marshall, of Tuckahoe.

Through the efforts of our Executive Secretary, Dr. Reik, and his assistant, Mrs. Taneyhill, Woman's Auxiliaries have been organized in 20 counties. I desire to urge our members to support this good work much more actively. It does seem that in some sections of our state the support given is only passive, and at times the attitude is almost cynical. The Woman's Auxiliary offers an excellent opportunity for service, and I am happy to note that an increased interest in this good work is being manifested among the wives of our members. Reports of their meet-

ings, with the results of their activities, are published monthly in the Journal.

I think you will agree with me that our State Society Journal has been very much improved in the last few years and that today it ranks high among the medical journals of the country. I congratulate the Editor, Dr. Reik, on his very efficient work, and hope that more of our members will feel that he is deserving of better coöperation in the future.

We have tried to assist and coöperate with our State Board of Medical Examiners in every way possible and I regret that as yet we have not been instrumental in helping them secure more financial aid to carry on their work. As evidence of our approval of their work, the Welfare Committee of our State Society unanimously voted to give a complimentary dinner, at their personal expense, to the State Board of Medical Examiners, which dinner was given a few evenings ago and was a very pleasant occasion.

With the adoption of our revised Constitution and By-Laws the future work of our Society will be accomplished with more precision and despatch. I feel that the proposed change in selection of the members of the House of Delegates will give us a much more representative body and I hope that its work will be expedited by reason of the numerical change. I firmly approve of separating the work of the House of Delegates from the Scientific Session, which has been tried this year purely as an experiment. Since our new Constitution and By-Laws provides for only one Secretary, I strongly recommend that he be granted a full-time office assistant.

I suggest that the First Vice-President be considered as the President-Elect and be invited to participate in the various meetings of the officers during the year. As a result, he will become more familiar, in advance, with the many duties of the presiding officer and will consequently be all the more valuable to this society promptly after installation. Another result of this procedure would be to make him better acquainted with the men throughout the state and thereby place him in a better position to select members for the various committees to be appointed.

I recommend that such facilities be provided as may be necessary to carry opportunities for post-graduate study to the physicians in more remote parts of our state. A previous attempt in this direction was made a year or two ago but was unsuccessful because of the lack of general interest.

I feel that the past year has been a period of definite progress and that something has been accomplished for the good of our Society and its members which will have a tendency to elevate the science of the healing art. Whatever success I have met with during the past year and what little good has been accomplished for the good of this Society has been very largely the result of the constant efficient efforts of our two most faithful secretaries, Drs. Morrison and Reik. I have considered it my duty to give this beloved old Society my very best thought and effort at all times during the past year. I fully realize the responsibility of this high office, but the consequent sacrifices necessary to carry on the work have been repaid in great measure by the loyal support of the other officers and the members of the various committees.

In conclusion, allow me to thank all of you for your hearty coöperation and your kind indulgence, and I sincerely trust that my feeble efforts during the past year have justified your confidence.

EYE MANIFESTATIONS OF SYSTEMIC DISEASE

WILLARD G. MENGEL, M. D.,
Camden, N. J.

Assistant Surgeon to the Wills Eye Hospital, Instructor in Ophthalmology, Graduate of Medicine, University of Pennsylvania.

The eye, as an indicator of systemic disease, is known by all. It reflects, as a mirror, the pathologic process in some distant organ or system. As an aid to diagnosis, and oftentimes in detecting disease before characteristic symptoms of that disease are evident, the im-

portance of eye manifestations is beyond question.

Ocular manifestations of systemic disease cover a broad field. The manifestations in any single disease provide sufficient material for a separate discussion. Details will be omitted for the sake of brevity, and only the common and more important diseases included.

A close relationship exists between systemic pathology and ocular disturbance. Examination of the retinal arteries gives valuable information as to condition of the vascular system. The retinal arteries by the thickness of their walls and tortuosity, are an index of generalized arteriosclerosis, which is especially important in estimating sclerosis of the cerebral arteries. Oftentimes, small hemorrhages in the fundus are the direct precursors of more grave hemorrhage. Changes in the walls of the vessels that are visible with the ophthalmoscope are of great diagnostic significance. Under normal conditions, the walls of the retinal vessels are perfectly transparent, so that ordinarily we see only columns of blood within them, but in arteriosclerosis a white margin to the arteries is seen, caused by thickening and opacity of their walls. Oftentimes the retinal vessels appear as white bands, or with a very narrow column of blood; in marked cases, pulsatory movements within them may be seen.

Interstitial keratitis may be the first active sign of congenital syphilis brought to the attention of patient and physician. Bilateral interstitial keratitis is almost pathognomonic of congenital syphilis. Painful blepharospasm, intense photophobia and copious lacrimation characterize the affection. There are ciliary injection and corneal haze. Delay in initiating treatment for interstitial keratitis may result in some permanent corneal haze and impairment of vision.

Paralysis of an ocular muscle in a patient under 45 years is usually due to lues. Reflex immobility of the pupils, more commonly known as the Argyll-Robertson pupil, and optic atrophy are manifestations of syphilis and tabes. Cases of uveitis occur as secondary manifestations of syphilis. Iritis and cho-

rioditis with dust-like floating vitreous opacities are frequently seen in lues, and the latter are always suggestive of syphilis. Cerebral syphilis often manifests itself to the oculist by a choked disc. Cerebral lues is next to brain tumor in frequency of producing choked disc.

Clinical experience has proved that white spots may occur in the retina in a very large number of diseases; a few of which are poisoning with phosphorus or with quinin, diseases of the liver, hydrocephalus internus, and arteriosclerosis. White patches of degeneration are met with in syphilis, sepsis, and in such diseases of the blood as anemia. Diabetes and chronic nephritis have to be taken particularly into account. Even a tumor of the brain can excite, in rare cases, a picture like that of albuminuric retinitis. This versatility in the causation of such spots in the retina is due to the fact that the highly organized and easily destructible protoplasm of the retina, with its very small capillaries, reacts readily to circulatory disturbances and is often affected sooner than other tissues by changes in composition of the blood and juices of the body. Hence it is that the retina is so often an indicator of constitutional disease. In many cases, the ophthalmoscopic picture is so characteristic as to form an accurate guide to diagnosis.

All forms of kidney disease, which result in albuminuria, may be complicated with retinitis, especially the atrophied kidney. Retinitis may be the only symptom causing a patient to consult an oculist for examination, and as soon as it is recognized the patient must be sent to his physician for treatment of the nephritis.

Foci of infection cause a number of eye diseases; corneal ulcers, iritis, chorioiditis, retinitis, optic neuritis, retrobulbar neuritis, choked disc, vitreous opacities and hemorrhages. When the focus can be eliminated early enough, prompt recovery is obtained.

The common manifestations of diabetes are cataracts and retinitis. Unfortunately, cataracts make their appearance generally during the later stages of their disease, and are not so favorably influenced by insulin. The earlier

cases are usually binocular and rapid in development. Local treatment is useless, the lens usually becoming completely opaque. With the use of insulin, lens complications are becoming less frequent and certain operative procedures are safer. Diabetic retinitis is practically always bilateral. In cases of diabetes of long duration, retinitis is seldom absent. Opacities and hemorrhages in the vitreous occur more often than in the retinitis of nephritis.

Eye changes following head injuries are important in determining increased and increasing intracranial pressure. When choked disc is found, together with other symptoms of increased intracranial pressure, operative intervention is imperative; relief of pressure, when done in time, prevents consecutive atrophy of the optic nerve. Destruction of, or injury to, the visual centers or tracts can be demonstrated by a visual field, when the patient is able to cooperate. Muscle paresis and paralyses play a part in the diagnosis.

Concerning brain tumors, the ocular findings are very essential. The question of increased intracranial pressure is important. Equally important is a field of vision, which will give definite information in regard to any lesion causing pressure on any part of the optic nerve, chiasm or tract.

In tuberculous meningitis, optic neuritis is present in about half the number of cases. In cerebrospinal meningitis, extra-ocular palsy is common. Chronic forms of exudative chorioiditis, and recurrent vitreous hemorrhages, are often caused by tuberculosis. Tuberculosis of the eyes manifests itself generally in apparently healthy individuals, in whom chest symptoms have not been recognized but in whom careful examination shows evidence of tuberculosis elsewhere. The lesion in tuberculosis of the iris is always a secondary infection. Interstitial keratitis is tuberculous in only 10% of cases.

A certain connection exists between phlyctenular conjunctivitis and a scrofulous diathesis in children. Not all children with scrofulosis have eye manifestations, but the percentage is high. The anemic, ill-nourished but

bloated looking child with pale skin, thick lids and excoriations of the skin at the outer canthus, frequently a moist eczema of head, scabs and scales on the ears, nose appearing eczematous and fissured—this child is frequently the subject of severe eye symptoms. Painful photophobia and marked blepharospasm with copious flow of lacrimal secretion characterize the affection. Small red eminences called "phlyctenules", appear at the limbus. These form small ulcerations which at times migrate over the surface of the cornea, producing light opacities which, if located over the corneal center, cause impairment of vision. The nature of scrofulosis, particularly its connection with tuberculosis, has been much discussed. The frequency of this type of keratoconjunctivitis in children shows the intimate connection of the eye to systemic disturbances. Xerosis and keratomalacia are also affections of the cornea which have direct relationship to nutritive disturbances and dietary deficiencies.

The ocular manifestations of exophthalmic goiter are well known. The exophthalmos varies from mere prominence of the eye-balls, to a degree of protrusion so great that the eye lids are unable to close. On rolling the eyeball downward, the lid follows slowly or does not move at all. There is diminished frequency in winking, also widening of the palpebral fissure producing a peculiar stare.

When treating diphtheria watch for eye complications. These usually develop during convalescence, in the third or fourth week after onset of the disease. The commonest disturbance is failure of accommodation, from paralysis of the ciliary muscles, resulting in inability to focus upon near objects. Strabismus from paresis of the extra-ocular muscles, especially the external recti, occurs frequently.

At this time, it seems appropriate, at the risk of digressing, to mention an ocular condition, not the result of systemic disease, but of sufficient importance to the physicians to be included in this connection; that is strabismus, or squint, in children, and the resultant amblyopia ex-anopsia. Strabismus convergens usually develops in the early years of life. Statistics show that the monocular variety be-

gins in about 75% of cases toward the end of the fourth year, and that the alternating variety appears rather earlier in 30% of cases, sometimes as early as the second year. When the eyes point in different directions, it would naturally be expected that the child should see double, but this is not characteristic of muscular strabismus in the majority of cases because visual impressions made in the deviating eye are suppressed. The permanent exclusion of images formed in the strabismic eye usually produces an effect, and we find in such eyes a high degree of amblyopia, especially when they have been turned in for a long time.

When an eye has never taken part in the visual act, as in cases of early squint, congenital cataract, corneal scars, or other obstruction to light rays, the accompanying dim vision may be altogether, or partly the result of simple non-use, hence the term "amblyopia ex-anopsia". In such cases, especially in squint, where the defective sight is largely due to presence of high degrees of hyperopia or astigmatism, or both, correction of this ametropia, with exercise of the eye, may result in much improvement of sight or even in a return to normal vision. In other instances, however, correcting lenses do not help and we may then conclude, even in the absence of positive signs, that structural changes or defects exist, probably in some portion of the extrabulbar nervous apparatus. The percentage of amblyopic eyes in these children becomes greater the longer the strabismus has lasted, and the degree of amblyopia increases with duration of the strabismus. The importance of having cases of squint treated as early as possible to prevent permanent squint, amblyopic eyes, and loss of vision, is evident.

Ocular manifestations are present in a large number of diseases. Oftentimes, serious damage to the easily destructible tissue of cornea and retina might be averted by early diagnosis and treatment, the eye physician working hand in hand with the general physician. The intimate relationship of ocular to systemic pathology is evident and of great value as an aid in diagnosis, in detecting diseases, and conserving useful vision and happiness.

RECOGNITION AND RELIEF OF ACUTE SINUSITIS

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The term "sinusitis", as used in this paper, refers to inflammation of one or more of the nasal accessory sinuses. It seems to me that a discussion of this subject is particularly appropriate at this time as all of us have seen cases of this character within the past month, some of which were properly diagnosed while others were treated as neuralgia or headache due to some other cause. If sinusitis is diagnosed promptly and proper treatment instituted, the pain may be markedly lessened, the course appreciably shortened, and the dangers of complications mitigated. In other words, we are just as much responsible for the diagnosis and treatment of our cases of sinusitis as we are for recognition of appendicitis or mastoiditis.

In order to more thoroughly understand the mechanism of drainage of the different sinuses, a brief résumé of their anatomical relations to the nasal cavity will be helpful. The accessory sinuses may be regarded as pseudopodal appendages of the nasal cavity proper. They are formed by evagination of the nasal mucous membranes into the overlying hard parts, and by bone resorption. The end-result is bony cavities communicating with the nose by small openings, or ostia, lined with mucosa continuous with that of the nose. The blood and nerve supply enter at the ostium since the entire lining is an extension of the mucosa originally at this point. This is important to remember as it demonstrates the value of employing means to reduce congestion at the sinus openings. Any narrowing at the ostium of a sinus dams back the venous outflow and thus intensifies engorgement.

The maxillary sinus is present at birth, but so small that the cavity is practically filled by its lining mucosa. At this time, it lies internal to the orbit but as growth occurs with downward development of the alveolar process the

cavity enlarges downward and laterally beneath the orbit. Its permanent shape is attained after eruption of the permanent teeth, about the fifteenth to eighteenth year. In the adult it is a pyramidal shaped cavity with apex at the junction of the malar bone with the superior maxillary, and base formed by the lateral wall of the nose. It is bounded above by the orbital plate of the superior maxillary, anteriorly by the canine fossa, and posteriorly by the pterygomaxillary fossa. The frontal sinus is not present at birth. During the second year there is an upward expansion from the anterior ethmoid cells, but it is not until the eighth or ninth year that this sinus can be recognized as a distinct cavity in the frontal bone above the root of the nose and external to the supra-orbital ridge. Ethmoid cells are present in the new-born, increasing in size rather than in number as growth occurs. The number of cells may vary from 2 or 3 up to 10 or 12 on each side. This group of cells is referred to as the "ethmoid capsule" and embraces all that portion lying between the internal orbital plate and the superior half of the lateral nasal wall. In other words, the ethmoid occupies approximately one-half of the entire space between the floor of the nose and the cribriform plate. The sphenoid sinus is represented at birth by a furrow on the anterior surface of the sphenoid bone; by the sixteenth year it has attained its permanent size and shape, when it occupies the body of the sphenoid bone, and is situated directly behind the ethmoid capsule.

In the erect posture the frontal outlet or ostium is at its most dependent position; the maxillary is in the upper portion of its internal wall; the sphenoid in the upper third of its anterior wall. The ostia of the ethmoids vary in location—some communicate with neighboring cells while others open into the nasal cavity. The frontal, maxillary and anterior ethmoids drain into the nose underneath the middle turbinate. The posterior ethmoid cells and sphenoid have their ostia above the middle turbinate.

An acute sinusitis should be suspected if acute rhinitis becomes aggravated, if the purulent discharge continues longer than usual, if

there is unusual headache in some special or typical location, if pain is intensified by stooping, blowing the nose or in fact any other act which produces sudden jarring of the head or causes an increase in congestion of the mucosa of the nose and sinuses. Given such a case, we must next determine which sinus or group of sinuses is involved. This is done by means of the history, symptoms, anterior rhinoscopy with the head mirror and nasal speculum, posterior rhinoscopy with the nasopharyngoscope, transillumination and roentgenography.

The chief symptom to analyze is pain. If the maxillary sinus is the seat of disease, pain may be present or absent, but in the first stages there is practically always a feeling of distention and pressure in the region of the sinus involved. If pain is present it usually assumes the character of a neuralgia; however, this neuralgia is not confined to the superior maxillary area. There may be pain in the teeth of the upper jaw of the same side or over the orbit of the affected side; in fact, supra-orbital pain may be the only symptom and of such persistence as to simulate frontal sinus disease. It is not at all an uncommon occurrence to have cases referred for treatment of frontal sinusitis that prove to be empyemas of the maxillary antrum. After the disease has lasted for a few days, if pain has been a prominent symptom it usually becomes remittent in character, coming on about 9 or 10 o'clock in the morning, reaching its heights about noon, and gradually wearing away in the afternoon. There may or may not be tenderness over the sinus affected.

In acute frontal sinusitis pain and headache are the most prominent symptoms, being present from the very beginning and persisting throughout its course. The character of pain in the beginning may be a feeling of pressure and heaviness, but it soon becomes sharp, burning and lancinating, or dull and throbbing. The seat of pain is primarily in the region of the affected sinus, but embraces more or less the entire frontal region. The usual history of these cases is that, while headache is a constant symptom, the intense pain is felt shortly after arising in the morning and continues for 2 to 4 hours. However, it

does not run an even course as these exacerbations of pain may be brought on at any time by any condition which tends to cause congestion in the head. Tenderness on pressure and percussion at the junction of the inferior and lateral walls is an almost pathognomonic symptom. It is at this point that the bone is most often affected and rupture occurs. Tenderness at this point should be carefully compared with that of the healthy side.

The headache of acute ethmoiditis is more or less constant, with irregular periods of exacerbation; usually a dull ache between and just underneath the eyes. There is often tenderness in the region of the inner canthus. In severe cases there may be redness and swelling at this point and even perforation. Since these cells are in close relation to the orbit, ocular symptoms are prominent; tenderness of the eye-ball, pain upon rotating and epiphora.

When the sphenoid becomes markedly involved during an acute cold in the head, the headache becomes more severe over that side of the head, and pain may be localized in the parietal and temporal region; though there may be a sense of pain behind the eye or in the region of the ear of the affected side. Tenderness of the eye-ball is very common. Pain in the ear and over the mastoid should receive the most careful consideration, for occasionally cases are seen with pain and tenderness over the mastoid just as marked as in true mastoiditis. A normal ear drum with normal hearing usually excludes mastoid involvement, but when the picture includes an injected ear drum the problem becomes more complicated. This neuralgic pain in the mastoid region in posterior sinus disease has no doubt been responsible for many incised ear drums and a few mastoidectomies.

Careful examination of the nasal chambers is the most important aid in arriving at a diagnosis of sinusitis. In anterior rhinoscopy, the head mirror with reflected light is essential to get proper illumination of the parts to be examined. It is necessary to shrink the soft parts before much information can be obtained, and this may be done with cotton pledgets dipped in a 3% solution of cocain to

which 2 or 3 drops of adrenalin chloride has been added. If pus is seen issuing from underneath the anterior end of the middle turbinate we know that it is coming from the antrum, frontal or anterior ethmoid cells. If coming from above the middle turbinate the sphenoid or posterior ethmoid cells are involved, unless, because of peculiar configuration of the nasal cavity, pus from underneath the middle turbinate has found its way into this location by capillary attraction. To determine whether there is pus in the antrum, we may cocaine underneath the inferior turbinate and insert an antrum needle, after first washing out the nose with normal saline. If, upon irrigating the antrum with saline, pus is washed out, we have positive proof.

Now, pus may have found its way into the antrum down through the hiatus semilunaris from the anterior ethmoid cells or from the frontal sinus, the maxillary antrum acting in this case as a reservoir. To rule out the frontal, wash out this cavity by aid of a frontal sinus cannula, first cocaine and using a graduate probe to locate the frontal canal. If no pus is washed down, we have left only the anterior ethmoid cells to exclude. Pus in these cells is detected by washing out the antrum and having the patient wait an hour, for a second washing. If pus is found at this second washing it must come from the overlying anterior ethmoids, as it does not so quickly reform in the antrum.

In most cases of acute sinusitis, the condition of the patient and stage of the disease do not justify this manipulation to arrive at a diagnosis. At such a time the other signs and symptoms taken in conjunction with a less extensive intranasal examination are invaluable.

The posterior nares may be examined with the nasopharyngoscope. In most patients this is the only way that pus may be seen coming from the sphenoid sinus, and often times disease of the anterior sinuses is diagnosed by this method. Within the past week a patient was examined from whom no pus was noted by anterior rhinoscopy but, posteriorly, a stream of pus was seen coming from underneath both middle turbinates, and irrigation of

the antrums revealed empyemas in both. If no free pus is noted at time of examination, suction or negative pressure applied to the nares may bring about its appearance and thus aid in a diagnosis.

Transillumination of the antrums and frontals is an aid also. For this examination a well darkened room is necessary. To examine the frontal, a small bright lamp is placed against the inner, under surface of the superior orbital wall. A healthy sinus should be outlined on the frontal bone by a reddish glow. In examining the antrum, the lamp is placed against the inferior orbital wall, with the mouth open, and the reddish glow is seen on the hard palate. If a sinus is filled with pus the light is not transmitted to the same extent and in many cases no light at all is seen. However, there are many other factors that may influence light transmission, so this sign is not always reliable.

X-rays are a valuable aid but often it is impossible to state with certainty whether the shadow is due to purulent secretion or to hyperplasia of the mucosa.

The treatment of a given case of sinus disease depends upon the stage of the disease, the individual symptoms present, and the particular sinus or sinuses involved. If the disease is pursuing a mild course it may be treated expectantly. On the other hand, if there is evidence of impending cerebral or orbital complications prompt and energetic measures must be resorted to. In the first stage of acute sinusitis general systemic treatment is most important. The patient should be put to bed, given free purgation and profuse sweating induced by the administration of aspirin. When the secretory stage of the disease becomes established the main object of treatment is to keep the drainage passages as clear as possible. This is accomplished by shrinking the mucosa with a 4% solution of cocain to which a drop or two of adrenalin solution has been added. A much stronger solution of cocain, even up to 20%, is sometimes advised. Cotton pledgets dipped in the solution are placed high up in the nose, on both sides of the middle turbinate, if this is possible. These are removed after a few minutes and the nose irrigated

with very warm normal saline to wash away the irritating discharge and somewhat further shrink the mucosa. Then, one of the colloidal silver preparations may be applied with cotton tipped applicators, or on cotton pledgets which may be permitted to remain in the nose for about 20 minutes.

This procedure may be carried out once or twice each day. In the interval between treatments, ephedrin sulphate may be used by the patient to keep the nasal chambers open and thus promote drainage. The ephedrin may be used in an atomizer or squirted into the nostril with an eye dropper directed toward the root of the nose. Inhalations of steam containing menthol and compound tincture of benzoin will often aid greatly in promoting drainage. The ice bag or ice cold compresses applied to forehead and temples will help to relieve pain. If heat is more comfortable there is no contraindication to its use. If the headache is not controlled by aspirin, alonal or some other analgesic may be used.

If the disease is not controlled by these measures it will be necessary to resort to a surgical procedure, the severity of which will depend upon the virulence of the disease. Infraction of the middle turbinate or removal of its anterior portion may be indicated when one or more of the anterior sinuses are involved, particularly in frontal sinusitis.

When the subacute state is reached the inflammation is becoming definitely limited to one or more of the sinuses, and treatment must be directed toward that particular sinus. If it is the maxillary antrum, it should be irrigated by needle puncture underneath the inferior turbinate. If it is the frontal it should be irrigated through the nasofrontal duct. The sphenoid can be irrigated through its ostium. Drainage from the ethmoid cells can be encouraged by the astringent action of argyrol packs in the region of the middle turbinate. If subacute sinusitis receives prompt, thorough treatment it will readily clear up; if neglected it easily drifts into a chronic condition which may require a radical operation to bring about relief.

In the more virulent infections, complications may occur. This is especially true if

any sinus is not getting adequate drainage. Abscess and fistula formation may appear on the face. The most common site is above the internal angle of the eye, and is due to fronto-ethmoidal suppuration. Some of the orbital and brain complications that may occur are: thrombosis of the central vein of the retina; thrombosis of the cavernous sinus; retrobulbar neuritis; orbital abscess; meningitis; epidural, subdural and cerebral abscesses.

TREATMENT OF VARICOSE VEINS AND THEIR SEQUELS BY ARTI- FICIAL OBLITERATION OF THE VEIN

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Newark and Elizabeth, N. J.

The treatment of varicose veins and of their complications is of vast importance. Almost every physician is confronted, to a certain extent, with the solution of this problem, since varicose veins do not only cause cosmetic disturbances but frequently lead to really grave conditions. The young woman of fashion complains usually after a first pregnancy, of a bulging of the veins of her leg, which thin stockings and her short skirts disclose to view. Complaints of lancinating pains and a sensation of bursting are to be heard from some patients, especially those who remain upon their feet during a large part of the day. This condition, and the very itchy eczemas of varicose legs and ulcers, which are recalcitrant to any method of treatment, are extremely annoying. It is quite evident that all these symptoms produce a great deal of disability. Many patients have to give up their occupation and even those whose work is not strenuous, such as housewives, are compelled to rest the greater part of the day, especially when thrombophlebitis sets in. We notice such people wandering from one physician to another, trying every possible mechanical support, until they finally fall into the hands of quacks. Surgical intervention is very often

disliked, because it does not guarantee against relapse and patients object to repetition of an operation.

It is easily understood that search for a remedy to improve or heal these conditions has always been in the foreground of medical interests. At the beginning of the nineteenth century an Italian surgeon, Giovanni Battista Monteggia (1762-1815), tried to obliterate varicose veins by injections of alcohol. This method did not find followers and was almost forgotten until 1904, when Tavel, of Berne, recommended injections of a 5% solution of carbolic acid into the distended vein after subcutaneous ligation, a combination of conservative and surgical methods. From that time on, various attempts were made to inject chemicals into the varices in order to produce obliteration. Geneviev used a solution of quinin and urethane; Troisier a sodium citrate solution; Siccard and Gangier a solution of sodium salicylate (20, 30 and 40%); P. Linser formerly used a 1 to 2% solution of bichloride of mercury. None of these chemicals is indifferent to the body. It was Karl Linser who succeeded, after experimental and clinical investigations, in introducing concentrated solution of sodium chloride for obliteration of varicose veins. Remenovskiy, from the Clinic Nobl, in Vienna, obtained very good results by injecting a 66% glucose solution.

All these remedies have one thing in common—production of an artificial thrombophlebitis. The wall of a normal vein shows great resistance. We may, for instance, inject salvarsan many times into the same vein without producing damage. The intima of a varicose vein is almost always affected, showing progressive and, more often, regressive changes. All hypertonic solutions, according to Paul Linser, damage the wall of varicose veins and form, through gradual deposit of inflammatory products, a thrombosis which is characterized by the great tenacity with which it clings to the wall of the vessel. Histologic examinations made by Bazelis, Wolff and Karl Linser, showed grave damage to the endothelium, which is partly necrotic and sometimes entirely absent. Formations of fissures and splints of the middle layer, consisting of mus-

cle and connective tissue, are to be seen. After 12 to 24 hours, formation of the thrombus, which is closely adherent to the damaged wall of the vein, begins to set in. Reviewing the pathologic-histologic findings, we understand why the older investigators had poor results in comparison with the later. The former tried to coagulate the blood in the vein, while the latter damaged the wall of the vein in order to produce the obliterating thrombosis.

In considering the production of an artificial thrombosis our first thought turns toward the danger of embolism. There is no question but that the fear of embolism kept the majority of physicians from practically applying this excellent method for a long time. That practically no danger of occurrence of embolism exists has been proved; not only by statistics of numerous prominent investigators, but by the anatomic-pathologic findings mentioned above and, especially, by our knowledge of blood circulation in varicose veins.

It must be admitted that our knowledge of the etiology of varices is very limited. Histology does not give us any definite proofs, nor did the theory of passive stasis turn out satisfactorily. Nobody has succeeded experimentally in producing typical varicose vein complexes by artificial venous stasis. There was always a formation of collaterals which re-establish circulation. All the theories beginning with the general weakness of the wall of the veins, endocrine disturbances, etc., and ending with Trendelenburg's theory of primary insufficiency of the valves (although this is a very important symptom of varices), have failed to give a correct and definite idea of the etiology. However, we do know something about the circulation in varicose veins. This knowledge is important in order to understand why the danger of embolism is scarcely to be considered. We know that, according to the phenomenon of Trendelenburg, the insufficient valves do not close the lumen of varicose veins and that by compression of the saphena, after the vein is emptied by raising the leg, the vein does not fill up from the periphery, as happens under normal conditions. Perthes showed that by compressing the filled varicose veins at their most proximal point

and allowing the patient to walk, the veins beneath the compressed area were gradually emptied; movement of the musculature presses the blood away and pumps the varicose veins empty. In other words, the blood, in varicose veins, does not flow toward the heart but toward the periphery. This was proved by Jentzer, by radiographic investigations with a solution of strontium bromide. Magnus, also, has demonstrated with Volkman's hemodromometer that with a patient in the horizontal position the blood in the varicose saphena flows toward the heart. If, however, the patient is in an upright position, or is bending at a certain angle, the stream remains stationary a definite time and then flows back toward the periphery. It is evident that the blood flowing to the periphery without passing the lungs is poor in oxygen and rich in CO₂ and, therefore, not suited to nutrition of the tissues. Magnus is of the opinion that these abnormal conditions of circulation are the best proof of the fact that embolism is extremely rare in so many infectious thrombi and, if an embolus should circulate, it would be carried into the stream of the saphena and there cause nutritive disturbances and ulcerations. This is also the reason why we observe embolism in patients with varicose veins when they are confined to bed by some other illness and never when they are on their feet following their normal occupation. During the past 18 years, an enormous number of cases of varicose veins have been treated by injections. Paul Linser claims that in many years of experience he came to the conclusion that the danger of embolism does not exist. The thrombi adhere too tightly to the walls of the vein. Nobl emphasizes the statement that in 2960 patients treated by this method he never observed any pulmonary embolus. Sir Sidney Alexander, Douthwaite, Vischer, Siccard and Gangier, Hepworth and others have used this method in hundreds of cases with excellent results and recommend it highly.

In order to present a most accurate picture, I should like to mention also a few unfortunate accidents which have occurred during the course of such treatment but which, in my opinion, should not be altogether considered

as caused by the treatment itself. As far as I know, there have been 4 fatalities reported in the literature, 3 in Europe and one in America. The first case was reported in Prague. Some time after the obliterating injection the patient died of embolism. Investigation proved that up to the time of treatment, the patient had suffered from furunculosis of the upper leg treated and of the buttocks, and had not so informed the physician. It is explainable that in this case the thrombus became infected by the furunculosis and loosened. The second case occurred in Vienna. At the meeting in which it was reported, Nobl called attention to the fact that the fatality did not have anything to do with the injection. In the third case, in Denmark, an infection of the vein was, also, present and an embolism occurred. The fourth case happened in Minneapolis and was reported by Olsen in the *Jour. A. M. A.* An autopsy was performed and the following diagnosis was made: (1) varicose veins, (2) phlebitis and thrombosis of the right internal saphenous vein, (3) pulmonary embolism. I do not know whether this case has been presented or discussed in a medical meeting but presume that accidents may happen even during most successful treatments. How careful one must be in his judgment about the coincidence of accidents and therapeutic measures, is shown by the case published by Conrad Siebert. A patient was brought to the hospital, suffering from varicose veins with ulcers. On the second day after admission the patient died suddenly before the treatment had been started. If the patient had been treated and an accident had happened, one would be inclined to have ascribed it to the injection. Sir S. Alexander mentions that in about 100 cases he had cured, only 1 caused him real anxiety. This was a case in which 3 weeks after the saphena magna from foot to fossa ovalis was cured, the patient developed fever (102.2°) and rigor. The history of the case showed that this patient had since about 1910 been subject to occasional shivering fits, lasting 2 or 3 days, the cause of which had not been revealed and diagnosed, because he did not consult a doctor. A bacteriologic examination showed *Bacillus coli*

invasion. Therefore, we must be careful in these unfortunate cases with our final judgment, especially in view of the numerous statistics of leading men who are very enthusiastic about this method and have proved its harmlessness. Of course, it should be done only if the best technical skill and experience are assured.

We are often confronted with cases of chronic, intensively itching eczemas of varicose legs, dermatosclerosis and ulcers which conditions always need attention and treatment. In spite of the best care, they make life a perpetual misery for these patients. I became interested in this method and, through personal experience, became convinced that the results obtained were excellent. I use a 20-26% solution of sodium chloride and also a solution called "Varicophin" (a 20% solution of sodium chloride combined with some anesthetic) which is highly recommended by Karl Linser and which has proved to be very efficient. The method which I use is very simple.

The patient stands upright in front of a couch. The leg to be treated rests on a pillow. After a few minutes of standing the varicose veins are filled. The skin over the vein is cleaned with alcohol. A sterile hypodermic needle is inserted into the vein, the needle somewhat parallel to the skin. The nurse holds a piece of gauze under the needle to catch the few drops of blood dripping from the needle as soon as it enters the lumen of the vein. It is absolutely necessary to perform the injection intravenously. Paravenous injections cause a great deal of pain and necrosis. After the needle is properly inserted, the patient assisted by the doctor, while the nurse holds the gauze under the needle to prevent the blood from dropping to the floor, cautiously lies down on the couch. Then, the doctor connects the filled syringe with the needle and tries to aspirate but a few drops of blood in order not to dilute the strength of the solution. After aspiration the nurse presses the blood gently away from the point of injection (about 2-3 cm.), the hands tightly around the leg. The injection follows slowly, drop by drop, into the vein which is to be kept empty

for about 2 minutes. After that, the nurse loosens her hand from the leg, first peripherally and then centrally. Light bandage follows. A slight cramp, felt after the injection, soon disappears. Previous to the treatment the patient should be examined for pyodermic infections. Temperature should be taken and a white and differential blood count should be made. Every change in the blood picture should be considered. Through personal communication with very experienced men I have been told that it is inadvisable to inject during and right before menstruation. Generally, the patient can be sent home and perform his usual work, 1 to 2 days after injection. When thrombosis is formed, the patient will notice a slight sensitiveness and redness, which disappears eventually. One of my patients, after an injection into the right leg (the left was injected without any trouble), had a definite swelling and pain, probably because the vein treated was localized over the knee which, naturally, is bent frequently. A few wet dressings changed the condition favorably and the patient is so much relieved that he has not returned to the office; he told me over the phone that he considers himself cured. I usually inject 2 c.c. of the solution; in small veins, for cosmetic reasons, I inject less. Larger doses, gradually increasing to 4-5 c.c. are given in large complexes of veins. The injections are made as often as necessary, usually once a week, according to the individual case. The patient, as I have already mentioned, may return to his usual occupation. Duthwaite says that some of his patients played tennis on the same day. He highly recommends this method where "neither work nor pleasure is interfered with, neither preparation nor anesthetic is required".

Relapses are possible. Either the previously obliterated vein becomes again permeable, or the thrombosis was not complete, or new varices are formed in constitutionally susceptible cases. A few injections will do the work, to which, I am sure, the patients will submit themselves sooner than to repeated surgical intervention.

In summarizing, I should like to say that in the artificial obliteration of varicose veins

by injection of a harmless solution like sodium chloride we have an excellent method which, if carried out properly, will successfully cure varicose veins as well as their sequels which, as we know, are enormously reluctant to respond to any other form of conservative treatment.

Foot Note: After this paper was read, a few similar articles appeared in the literature. Wolff (*Med. Journal & Rec.* April, '28) and Schussler (*Jour. A. M. A.*, April 28, 1928) recommend highly the above described method. Baur (*Berlin Medical Society*, February meeting, 1928) reported favorable results with the conservative treatment of varicose veins by obliterating injections. Others supported his statements.

J. A. Siccard & L. Gangier, Paris, published a reference book (*Le Traitement des Varices par les Injections Locales Sclérosantes*) on the same subject.

URETERAL STRICTURES

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During the past few years we have been running, at St. Michael's Hospital, in connection with the Gynecologic Service, a rather active cystoscopic clinic, and the purpose of this paper is to give you the impressions gained as to the frequency and importance of ureteral strictures. They will be presented in rather an elementary way, being reviewed in the order of etiology, pathology, symptomatology, diagnosis and treatment.

In 1902, Dr. Howard A. Kelly, of Baltimore, suggested an hypothesis covering this subject that was so far in advance of the views of the day that it was completely ignored. Since that time other minds, by observing, comparing and analyzing data on large numbers of patients, have finally arrived at the advanced position heralded by Kelly a quarter of a century ago. And the credit for this work belongs rightly to Dr. Guy Hunner, of Baltimore.

The literature of the past 10 years has shown an increasing appreciation of the importance of the ureter as a vital organ, and today ureteral stricture is looked upon as one

of the most common, as well as one of the most important lesions of the abdominopelvic cavity. It is a subject with which we are all familiar, but its repetition will perhaps help us to bear in mind the possibility of existence of this disease in doubtful cases.

I repeat, it is one of the most important lesions of the abdominopelvic cavity for these reasons: firstly, because of its important bearing on the pathology of the upper urinary tract; secondly, because of its direct influence on the patient's well-being, and thirdly, because of the indirect morbidity to which it gives rise through mistaken diagnosis and treatment.

As to its frequency, there appeared in the October number of "Surgery, Gynecology and Obstetrics" an article by Dr. Schrieber of Mount Sinai Hospital, New York, based upon autopsy findings of 100 consecutive cases, in which he concluded that ureteral strictures or stenosis is of relatively frequent occurrence, and that the incidence has been generally underestimated.

"Ureteral Stricture" has been defined as an intrinsic disease of the ureteral wall, resulting in narrowing of the lumen. It is looked upon by the urologists as a lesion with fixed and permanent characteristics; hence the frequent use of such terms as "wide caliber" and "narrow caliber" stricture. As a matter of fact, for days, weeks or months a stricture may have a caliber sufficiently wide to permit such good drainage that the patient is not aware of any defect; and yet within an hour he may be the victim of a severe renal colic which may persist for hours or days of the most intense suffering.

Before touching upon the etiology of strictures, suppose we briefly review the anatomy, histology and physiology of the ureter. The ureter proper is a cylindrical, membranous tube about 25-30 cm. in length, and 4 mm. in diameter, directly continuous near the lower end of the kidney with the tapering extremity of the pelvis. The ureters lie behind the peritoneum and enter the bladder at its base in an oblique direction, in such manner that when the bladder is distended the resulting pressure automatically closes the ureteral orifice. Embry-

ologically, they are formed from an offshoot of the Wolffian duct. Normally, the walls of the ureter are collapsed and in contact, and histologically they consist of 4 layers: (1) layer of stratified epithelium; (2) tunica propria composed of loose connective tissue carrying capillary blood and lymph vessels with few elastic fibers; (3) tunica muscularis of smooth muscle bundles, consisting of an internal longitudinal and an external circular layer; (4) adventitia of fatty connective tissue carrying blood and lymph vessels and nerves.

The propulsion of urine through the ureter is not a simple matter of gravity, but takes place as a result of peristaltic waves originating in the pelvis of the kidney and passing downward. These contractions occur every few seconds and force the urine before them by a series of rhythmic spurts. This peristaltic muscular action accounts in a large measure for the facility with which calculi are forced through the lumen of the ureters. Normally, the ureter presents 4 main constrictions: (1) at junction with its pelvis, (2) as it passes over the brim of the pelvis, (3) as it enters the bladder, (4) at its termination.

The causes of ureteral stricture are many. They may be congenital or acquired. Dr. Hunner, of Baltimore, says that he can state with some degree of certainty that they usually arise from some distant focal infection, and that by far the most common foci are in the tonsils, teeth and sinuses. Any portion of the body where there exists a chronic suppurative process may be responsible. In addition, there are urinary calculi, tumors of the pelvic organs, and trauma following injury as well as other well known causes.

Simple inflammatory stricture due to a focal infection in some other part of the body, is so overwhelmingly frequent, when compared to strictures from all other causes, that we are justified in saying that the disease usually originates from some such focus. Such a focus may have existed some time in the past, and may not be apparent until later in life. Any localized acute or chronic process may finally lead to ureteral stricture. Intestinal, gall-bladder, and appendix infections may account for some stricture cases, but according

to Dr. Hunner by far the largest number are the result of infections about the head. His reasons for this conclusion are briefly: (1) a careful history often reveals that the symptoms due to stricture began soon after an attack of tonsillitis, sinusitis, or a dental abscess; (2) treatment of the stricture area is often futile until one has located and eradicated infection in these areas; (3) dilatation of the stricture may result in cessation of all symptoms, and in the clearing up of a pyelitis, if present, only to have the patient come back weeks, months or years later because of the return of all symptoms following a fresh attack of tonsillitis, sinusitis, etc.

This view of Dr. Hunner as to the etiology of strictures is not accepted by everyone, nor is it borne out by the findings of Dr. Schrieber. He summarizes the causes as follows: (1) congenital ureteral narrowing, which usually appears as accentuated narrowing of a physiologically narrow site; (2) extension into the ureteral wall of neighboring inflammatory processes, especially adnexal disease in the female and advanced cystitis; (3) the potential kinking power of the structures that cross the ureter, namely the vas deferens and the uterine artery.

From a pathologic standpoint we will mention it only as it relates to the pathology of the upper urinary tract. The basis for most of the pathology is impaired drainage. Because of this impairment we find hydronephrosis, pyonephrosis, pyelitis, calculi with demonstrable stricture, and hematuria.

But it is of the symptomatology and treatment that we can speak best. The stricture is usually localized in the lower pelvic ureter, from 2 to 5 cm. up from the ureteral orifice. Because of this usual location in the pelvis in close proximity to various nerve plexuses, it is likely to present not only its local inflammatory symptoms, but various referred symptoms in the bladder, rectum, vagina, perineum, hip and thigh. Because of its resultant urinary stasis we may have any variety of kidney discomfort, from a dull back-ache to the most excruciating renal colic; and not infrequently we see, as in other forms of kidney disturbance, marked gastro-intestinal manifesta-

tions, such as indigestion, nausea, gaseous distension, and abdominal pain. Either the urinary stasis and absorption, or the gastro-intestinal condition, or a combination of both, may result in headache, at times of the severe migrainous type with accompanying crises of nausea and vomiting; or the general picture may be that of uremia. In spite of the varied and complex symptoms that may arise from ureteral stricture, the diagnosis, as a rule, is not difficult, and should be made with a fair degree of certainty. It is the first possibility to be thought of in the case of any patient who has had a few abdominal operations without relief of the original symptoms. Post-operative adhesions, for which so many patients are again subjected to operations, rarely, if ever, give relief, and most times serve only to increase the adhesions. Dr. Edward J. Ill told me of a case that had been operated upon 18 times, and had returned to the hospital for the nineteenth operation (for adhesions) but fortunately he discovered the presence of a ureteral stricture and the operation was avoided. The chief aid in diagnosis is the presence of pain in the pelvic region, usually thought by women to be due to the ovaries or uterus, backache, and bladder symptoms. These symptoms are likely to be of intermittent occurrence, particularly in the early history of the disease, and in this early stage they are prone to occur as premenstrual or menstrual disturbances. Bladder symptoms occur in fully three-fourths of our cases, and in at least one-third of these form one of the chief complaints. The urinalysis may be helpful, or because of its normal or approximately normal character, it may be quite misleading. In quite a few cases there is a pyelitis, with a urinalysis calling attention at once to the urinary tract. But in a large percentage of the cases we find only slight evidence of urinary tract disease, such as a trace of albumen, an occasional cast, an occasional leukocyte or erythrocyte, and frequently the urine is entirely normal.

Another aid in the diagnosis is palpation. Ureteral strictures are usually bilateral, although the symptoms may be confined to one side only. Usually both ureters are tender to

palpation at their crossing of the pelvic brim, or at a point about 1 in. to one side of and 1 in. below the umbilicus. Finally palpation of the diseased ureters near their entry to the bladder elicits much soreness or pain, reminding the patient of the previous pelvic discomforts, and causing a desire to void, especially if bladder symptoms have previously been present.

Inasmuch as the renal injury arises largely from defective drainage, it is needless to state that the first requirement of treatment is the establishment of good drainage. By so doing, the patient is saved perhaps days or months of pain and suffering, and certainly in most instances permanent damage to the kidney is avoided.

Our method of doing this, after we have first pyelographed and established the fact of the stricture, is by frequent dilatation of the stricture by means of the Kellyscope and catheter as outlined by Dr. Hunner. The wax bulb used in connection with the dilatation is, of course, increased in size until the required dilatation of the stricture is obtained, and at this point I would like to give a brief history of a few cases. They are not selected with a view of showing you extreme or unusual cases, but with the view of showing the early kidney changes resulting from strictures, and before, as the result of our treatment, permanent damage has been done. Here I might remind you that there are 2 definite classes of strictures; in one, hydronephrosis and hydro-ureter develop and the symptoms are usually easily and quickly cured; in the other there is often a smaller pelvis than normal and the ureter shows very slight dilatation; these are the hypersensitive type, the kidney is under constant tonic contraction to overcome the pain, and they probably develop more or less interstitial nephritis in the long run.

Mrs. M., age 38, was referred to me because of pain in left iliac region. She had been operated upon 1 yr. previously for a chronic salpingitis, at which time the left tube was removed. Her convalescence was entirely normal from this operation, but shortly afterward she again complained of this same pain, and it had been constant up to this time.

Has had 3 children, normal births, first 15 years ago, and the last 8 years ago. Pelvic examination was negative, with but slight fixation of the uterus as result of the salpingectomy. Pyelogram of the left kidney showed a slight hydronephrosis, kidney pelvis holding 17 c.c., with no hydro-ureter, and a stricture at the lower end of the ureter about 3 cm. from the ureteral orifice. Urinalysis was negative except for an occasional leukocyte. This ureter has been dilated 6 times up to 5 mm. Complete disappearance of the symptoms.

Miss T., age 35, factory worker, appeared because of pain in right renal and iliac regions. Has had trouble for past several years, and because of having been told that she had a chronic appendix she came to make arrangements for admission to the hospital to have her appendix removed. Palpation over McBurney's area presented no tenderness. Right kidney was palpable, but not enlarged. Slight tenderness on pressure. Urinalysis showed an occasional leukocyte, but no clumps, and many red cells. Culture was negative. Pyelogram of right side showed a stricture about 3 cm. from the ureteral orifice, with slight dilatation of ureter immediately above, and the so-called kinks of the ureter, most pronounced immediately below the kidney pelvis. After the second dilatation she was relieved of her symptoms, and over a period of 2 years, has remained entirely free of pain. This case was dilated to 4.5 mm.

Mrs. B., age 45, has not been free of pain, as she states, since birth of first child 20 years ago. Has a constant backache, and abdominal pain, principally in the upper abdominal regions. Headaches and indigestion usually accompanying, and these at times are relieved by aspirin and bicarbonate of soda. Operated on several years ago for gall-stones and a chronic appendicitis. For a while afterward she was relieved, but for the past few years has had as much pain as before. In the absence of positive findings to account for her complaints, cystoscopy was done, and the urine from the right side showed pus, blood and an occasional cast. The left side was negative. The pyelogram of the right side showed a kidney capacity of 25 c.c. with a stricture

of the ureter about 2-3 cm. from the orifice. There was a slight dilatation of the ureter immediately above the stricture. This patient was discharged after 8 dilatations up to 5.5 mm., but she continues to come back periodically for cystoscopy. She has gained considerably in weight, and reports that only rarely is she bothered with even indigestion.

Mr. R., 31, hardware business, chief complaint over a period of several months, dull ache in back, with frequency of urination. No pain nor burning. Physical examination and urinalysis negative. Cystoscopy showed negative urine from both sides, and a pyelogram of the right kidney presented the strictures or kinks, with but slight dilatation of the kidney pelvis, capacity 17 c.c. and no dilatation of the ureter. This patient was cystoscoped about once a month for 4 or 5 months, and since that time he has been relieved of all symptoms. The wax bulb was not used with him, of course, but at each cyptoscopy a larger catheter was inserted.

Mrs. C., 28 years of age, housewife, chief complaint acute colicky attacks of pain in right kidney region of about 9 months' duration. At first there were intervals of 3 or 4 weeks, but recently, the attacks have been quite frequent, and with one it was necessary that she go to bed for 3 or 4 days. Pain was relieved by narcotics, and she had been advised that an operation was necessary for stone in the kidney. Was operated on 3 years ago for chronic appendicitis. At that time she was referred to me, and upon admission to the hospital a pyelogram of both kidneys was made. There were no stones found in either kidney, and the pyelogram of the right kidney shows a hydronephrosis, slight, 27 c.c. being injected, with a stricture of 2 cm, about the ureteral orifice, with a kink in the ureter a short distance above. Urine from both sides was negative. This case has been dilated up to 4.5 mm., and for the past 6 months she has not had a repetition of the colic, and is able to do her housework without effort.

Mrs. H., age 33, chief complaint pain in right lumbar and iliac regions, with referred pain down the right thigh. Was operated upon 2 years ago for a chronic appendicitis, to

which the pain had been attributed, but no relief was obtained. The pain now is due to adhesions, she has been told. Pyelogram of the right kidney showed a hydronephrosis, 25 c.c. being injected, with a double stricture, one just above the ureteral orifice and the other a small distance below the kidney pelvis. Urine negative. This patient has had 4 dilatations, up to 5 mm., and her symptoms have been entirely relieved.

UROKINETIC DILATATION OF THE VESICAL SPHINCTER

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Many are the devices of the layman to overcome, with a minimum of effort, obstruction to urinary expulsion. Particularly is this true in cases of prostatic dysuria. One victim thereof may be obliged to sit on the toilet to void; another gently titillates the glans or prepuce to increase indirectly the stimulus to the nerves of his bladder musculature; a third must hear water flowing into the lavatory or toilet in order to start his stream—but there are too many such artifices to mention here. They are best known to their inventors and are observed with interest by the profession.

Whatever stimulus is used as an aid to urination, increased expulsive exertion by the bladder is inevitable, and one maneuver I have noted is so efficient as to be deleterious, since in performing it the perpetrator unwittingly adds extra insults to his bladder after the initial strain of starting uresis, and causes a superabundance of pressure throughout his whole urinary tract. Its success depends upon the fact that prostatic obstruction, in contrast to urethral stricture, is usually elastic, and it is enacted thus: after the subject has tra-vailed sufficiently to commence his urinary flow, which is small, weak, and hesitant, he compresses his penis for a few seconds between thumb and forefinger while continuing his propulsive effort (thus hydrodynamically

forcing more widely apart the obstructive prostatic lobes and dilating the sphincter vesicae). then suddenly releases the penile compression, with a resultant freer stream. This measure is repeated several times before urinary evacuation is complete, since prostatic impediment necessitates not only considerable pressure to initiate micturition but continued pressure to prolong it to a triumphant conclusion.

Any dysuric who practices the above-mentioned act should be advised of its potential harmfulness, and be the object of the particular attention of his physician, for he is apt to be classifiable among those cases Young describes thus: "One of the greatest dangers lies in the insidious development of grave renal changes with few symptoms of either marked frequency or difficulty of urination, or of chronic uremia, to warn patient or physician of the seriousness of the situation".

To persuade a man with mild subjective symptoms of prostatic obstruction to submit himself to proper care and relief is a major problem of the urologist, and it is to be hoped that ere long the early signs of prostatism may be given as much publicity as already has been awarded tuberculosis, cancer and syphilis. The public surely should be interested in learning through reputable sources of a disease which is a great destroyer of productive and economically valuable citizens.

THE DIAGNOSIS OF ACUTE SURGICAL CONDITIONS OF THE ABDOMEN

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This subject has been chosen with a full appreciation of its magnitude and the realization that it can by no means be adequately covered in the time allotted. Therefore, I will touch only upon the important phases of the problem of diagnosis, and mention some of their pitfalls.

In the first place, let us consider the history, both past and present, then the symptoms, and finally the physical signs and laboratory aids.

The carefully elicited history of an acute abdominal case, with the facts arranged in their proper sequence, is of great value in arriving at a correct diagnosis. The questions should not be suggestive nor should the physician commence with a tentative snap diagnosis in mind, for it is surprisingly easy to thus obtain misleading information. Due attention should also be given to antecedent attacks of a similar character, or indeed to any previous history suggestive of intra-abdominal pathology. Thus the previous occurrence of the hyperacidity pains of duodenal ulcer may point to a perforation, or the history of repeated attacks of indigestion with belching of gas and a "heavy feeling in the pit of the stomach" may indicate the likelihood that the focus is the gall-bladder. Multiple pregnancies or a history of typhoid fever are also suggestive.

Abdominal pain, one of the cardinal symptoms, is common to almost every acute abdominal condition, and also to certain conditions within the chest. The onset, character, location and periodicity of abdominal pain should be carefully determined. The violent, sudden onset of agonizing upper abdominal pain of a perforation of a peptic ulcer, or of an acute pancreatitis, the rhythmic "peristaltic pain", gradually increasing in crescendo fashion and often poorly localized, which betokens an obstruction of the bowel; the colicky, knife-like pains in the right hypochondrium radiating to the back and right shoulder that suggest a gall-stone impaction; or the more persistent, dull aching pain in the same region of an acute cholecystitis; the characteristic pain commencing, often with moderate severity, in the umbilical region and later becoming more pronounced and localizing to the right lower quadrant that we at once associate with acute inflammation of the appendix; the sharp sticking pain in the loin with referred pain along the groin to the genitals, which is typical of ureteral colic; these are examples of the way in which pain as a symptom is evaluated.

Vomiting is an important symptom and one should determine its relationship to the onset of the illness and its character, whether stomach contents or intestinal, whether or not gross blood is present, whether the vomiting ushered in the attack or came later in its course. Blake has remarked that where vomiting has been the first symptom of an attack of appendicitis it means a sudden violent distension of the appendix, and that therefore an emergency exists. Wilkie describes the clinical picture in acute appendicular obstruction (as from the impaction of a fecal concretion) as follows: "The patient is suddenly seized with acute cramp-like pain just above the umbilicus and vomits. The pain usually subsides but returns in spasms, usually with repeated vomiting". The vomiting seen in acute intestinal obstruction of the mechanical type (disregarding post-operative ileus) is of course dependent upon the site of the obstruction. For example, if the point of obstruction is at or near the pylorus, early vomiting occurs and consists of stomach contents; whereas if the obstruction is low down in the large bowel, such as a constricting growth in the sigmoid or descending colon, vomiting may be deferred for a number of days.

The objective signs on physical examination form, after all, the most important links in the chain of evidence upon which a diagnosis is reached.

These signs may be divided into general and local. Under the general signs are grouped the color, facial expression, evidences of dehydration, the presence or absence of signs of shock or internal hemorrhage, the pulse, temperature and respiration, the cardiac and lung signs. It is only by a careful examination of the remainder of the body that we can hope to exclude early pneumonia with diaphragmatic pleurisy, tabetic crisis, herpes zoster, angina pectoris, etc., and all of these medical conditions may present symptoms strongly simulating a surgical abdomen. Moreover, attention to the vital signs and general appearance of the patient is helpful in deciding just how serious is the constitutional ef-

fect of the abdominal disease where such is present.

Of the local objective signs tenderness stands first in importance. Tenderness should be elicited in a most gentle and meticulous manner, and its maximal point made out with as much accuracy as possible, for in it we have our best all around guide to the primary source of the intra-abdominal disease. There are 2 points worth mentioning, however, in evaluating tenderness: first, the individual variation in response to the palpating hand; second, in elderly obese individuals with a heavy layer of abdominal fatty tissue, the finer degrees of localization of tenderness may be quite difficult to obtain.

In general, however, and especially early in the course of the disease, the maximal point of tenderness represents with considerable accuracy the location of the acute focus; later it is of much less value. For example, some hours after an ulcer of the duodenum has perforated, the accumulation of fluid in the right lower quadrant may result in this region being the point of maximal tenderness, thus suggesting appendiceal origin. Moreover, when an organ is located out of its normal place and becomes the seat of acute inflammation, the symptoms of pain and the signs of localized tenderness will be referred to this site and may, therefore, be misleading. For instance, with a high retrocecal appendix, the tenderness may be in the gall-bladder region; or, if it is long and its tip extends over the pelvic brim, it may simulate very closely a right salpingitis, even to tenderness on vaginal or rectal examination. At this point the value of either a pelvic or rectal examination can not be too strongly emphasized. No study of an acute abdominal case is complete without it, for negative information is often helpful, and in cases where peritonitis is present, the exudate tends to accumulate in the pelvis quite early (especially in perforated ulcer or appendix) and marked tenderness is evoked by the examining fingers.

One of the most difficult differential diagnoses at times is between an acute right salpingitis and appendicitis in a low placed ap-

pendix. The history may not be of assistance and the physical findings closely resemble each other. As a rule, the tenderness in acute salpingitis is lower and more centrally situated. The examination by rectum or vagina shows marked tenderness on motion of the cervix, though a mass is often not detectable. The temperature and leukocyte count are generally higher in salpingitis than in appendicitis, while vomiting is either absent or less pronounced. However, there are cases in which, despite every effort to arrive at a positive diagnosis, it is impossible to distinguish between the two conditions, and in these cases it becomes necessary to advise operation. This is necessary to avoid the consequences of overlooking an acute appendicitis in the assumption that one is dealing with an acute gonococcal inflammation of the tube. It is less dangerous to explore an abdomen for appendicitis and find a salpingitis than to treat a case of acute appendicitis as a salpingitis. I have seen the latter course result fatally in two instances.

Rigidity. The diagnostic importance of muscular rigidity is not to be underestimated. It is always an indication of peritoneal irritation and if this is borne in mind it will assist in appreciating the process going on within the abdominal cavity. The source of the irritation may vary widely. Rupture of a hollow viscus causes the fluid contents thereof to escape and irritation sets in at once at the site of leakage. The overlying muscle becomes rigid and as spread of the fluid occurs the area of the rigidity increases *pari passu* until a generalized muscle spasm is found which we associate in our minds with a widespread peritoneal irritation. Gastric or duodenal contents, with their high acid or alkaline reaction, are intense chemical irritants and the rigidity they evoke is maximal. Urine, blood, bile, cyst fluid, and the contents of the small or large intestine are all irritants to a greater or lesser degree and call forth muscle spasm when they come into contact with the peritoneum. Microbic infection of the peritoneum, either primary, as in pneumococcus peritonitis, or secondary to infection in some portion of the alimentary canal (appendix,

gall-bladder, diverticulum, pancreas) also produces an irritation of the peritoneum, and rigidity ensues. The interpretation of this valuable sign is, therefore, one of extreme importance, since if it is overlooked it is likely to result in costly delay. In the early stages of peritonitis from any of the above mentioned causes, either primarily chemical or bacterial, the degree of rigidity is most marked. Later in the course the muscles apparently become fatigued and the boardlike rigidity gives way to a more doughy consistence, not a soft relaxation but rather a sense of resistance. A word of caution may not be amiss in interpreting the examination of the abdominal tone. Rigidity to be of real diagnostic value must be involuntary, for any individual may hold his abdominal wall tense during examination, either from fear of being hurt or sometimes because of the cold hands of the examiner. True involuntary spasm, however, denotes but one condition, namely, peritoneal irritation.

In some cases of strangulation of the intestine or renal colic there is a periodic spasm of the muscles which is probably due to stimulation of the sympathetic system, which causes the reflex vomiting and the pain. This rigidity is not of the same degree or intensity as that due to peritoneal irritation.

Hyperesthesia. Explanation of the mechanism of the production of areas of cutaneous hyperesthesia is beyond the confines of this paper. Suffice it to say that in certain acute abdominal conditions, especially in their early stages, a definite increase in sensitiveness to pain or tactile stimuli occurs that is of some diagnostic value. The most prominent of these areas is the triangular zone on the anterior abdominal wall on the right side, bounded by the anterior superior iliac spine, the umbilicus and Poupart's ligament. In acute appendicitis, this area is often definitely hyperesthetic in contrast to the same area on the left side when stroked with a pin or when a fold of skin is lightly pinched.

Mass. The presence or absence of a mass in the abdomen should be determined, bearing in mind that it may be a distended or misplaced

organ, an inflamed organ matted by adherent omentum, an intra-abdominal abscess or a localized peritonitis and, lastly, a true tumor, either benign or malignant.

Distension. In considering abdominal distension, we should note its location, its relation to the onset of other symptoms, whether or not it is associated with absence of the passage of bowel contents, and also whether or not it is relieved by enema. Percussion will assist in excluding ascites as the cause of distension. The most frequent cause of pronounced abdominal distension is intestinal obstruction; and as a rule low obstruction is provocative of a greater degree of distension than high. On the other hand, the more rapidly the symptoms have progressed since the onset the more likely it is that the obstructing point is high upon the small intestine. Visible peristalsis is definite evidence of obstruction and is most active just proximal to the obstructing point. When the maximal distension is on the right side of the abdomen, be on the lookout for an obstruction in the descending colon or sigmoid, for in these cases it is in the cecum that the most profound dilatation occurs.

Laboratory Aids. With the average case of suspected acute surgical abdomen, delay is in itself a great drawback. Therefore, extensive laboratory tests are contraindicated. Nor are they apt to clarify the situation, but often are misleading. The leukocyte and differential count are of value, perhaps, as corroborative evidence; seldom should they turn the balance for or against operation. If too much reliance is placed on a high normal blood count, some cases of appendicitis that merit immediate operation will be allowed to perforate. On the other hand, a high white cell and differential count are quite suggestive of pathology of an acute nature and when supported by clinical findings are of themselves a comforting assurance to family and physician.

A careful examination of the urine will often exclude or point strongly to a pyelitis or a ureteral or renal colic. It is also my impression, based on several cases, that in acute pancreatitis of the more fulminating type a trace of sugar may be found in the urine even when a preëxisting diabetes can be excluded.

The presence of a bubble of gas in the upper right quadrant has been repeatedly demonstrated by x-ray films in cases of perforation of a duodenal ulcer. If this aid to diagnosis is ready at hand it may well be utilized. However, when most needed it is often not available and the diagnosis can usually be made without it. Percussion often reveals obliteration of normal liver dullness and a dull tympany instead. Most cases of acute abdominal disease are too sick to warrant extensive x-ray examination, though if the condition permits, it may be permissible and often exceedingly valuable information is gained.

Experience has shown that many cases present such complexities of physical findings and such typical histories that one cannot make a positive diagnosis and, in such cases, the important decision to make is that one is dealing with an acute abdominal condition that warrants immediate operation. It is far wiser to acknowledge that our limitations are such that an exact determination of the focus of an acute intra-abdominal process is sometimes impossible than to adopt a policy of watchful waiting in the hope that further developments will point the way more definitely.

Statistics galore can be shown to prove that the chances of recovery in most of the acute abdominal conditions, especially ruptured ulcer, acute appendicitis and intestinal obstruction, are inversely proportional to the delay in instituting surgical measures for their relief. And mortality rates will not decline until the truth of this assertion becomes generally recognized by those who are first called in attendance upon these cases. To them belongs no small measure of credit for the happy outcome of an early operation, and conversely, if they delay until the golden moment of opportunity has passed, they must shoulder the major portion of the responsibility.

THE SIGNIFICANCE OF ABDOMINAL PAIN FROM THE SURGICAL AND MEDICAL STANDPOINT

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Elizabeth, N. J.

We have all met with the patient who suddenly becomes very ill. His pain is in the abdomen and is severe. He complains of nausea and vomits. He is distended. His pulse is rapid and his fever is high. He is much alarmed. What are we dealing with? Is it serious or not? Where is the lesion? What is to be done? Operate or wait? Give morphin or try to establish the diagnosis first? The symptoms may be mild, yet the pathologic condition and its prognosis serious, or the reverse may be the case.

Pain is a constant factor in acute abdominal conditions and merely as pain it means nothing, as it is common to all. Its mode of onset, duration, location and radiation are of the utmost importance; while its character as described by the patient may or may not be of value. We often hear pain described as boring, lancinating, cutting, sharp, grinding and so on. Describing a sensation is a difficult matter and something which few people can do with any great degree of accuracy. Again susceptibility to pain is a variable factor and that which seems unbearable to one, may be borne by another with little discomfort.

In making a diagnosis of acute abdominal condition, one must rely entirely upon the history of the case, one's observation of the patient and what one may learn from physical examination, particularly from palpation.

In the discussion that follows, I am presenting facts pertaining first, to the surgical abdomen and, second, those relevant to the medical abdomen; obviously, one cannot go deeply into either.

By far the most frequent acute surgical abdominal disease is acute appendicitis and, therefore, this condition should ever be in the mind of the practitioner. We are called to see a patient with pain in the abdomen and

find upon questioning that, usually though variable, the pain has its origin in the epigastric region and in some hours radiates to McBurney's point. Following onset, nausea and vomiting may occur. Constipation, though not always present, is the rule. Upon examination, we find the temperature ranging from normal to about 102° F. Oftentimes the patient is in a dorsal position with the right thigh flexed on the abdomen, in an effort to relieve tension on the affected side. Tenderness with rigidity is perhaps the most characteristic feature of acute appendicitis.

In making a diagnosis of acute appendicitis, there are certain acute conditions of the abdomen which should be kept in mind. Those diseases seldom accompanied by a temperature are Dietl's crisis, which occasionally results from the kinking of a ureter in a movable kidney, and stone in right ureter. The latter condition, however, causes a pain referred to the genitalia and red blood cells may be found in the urine; x-rays are also of service in the diagnosis of either. Abdominal crisis of locomotor ataxia, gall-stones, and acute obstruction of bowels, are also conditions to be considered. Those conditions associated with temperature which may confuse us are inflammatory conditions of the right tube and ovary, which should be differentiated from typhoid fever when the pain is chiefly in the region of McBurney's point. In the latter disease, the slow pulse, constant leukopenia, and enlarged spleen should put us aright. Acute pancreatitis may also be considered, although this is a comparatively rare disease and is associated with a definite tenderness in upper abdomen as well. Occasionally a lesion above the diaphragm (particularly in children) such as lobar pneumonia or diaphragmatic pleurisy will be accompanied by pain in the lower abdomen. Hence, a careful examination of the chest should be made before making a diagnosis of acute appendicitis.

We pass to the second condition to be discussed, namely, perforated peptic ulcer. And if an early diagnosis is important in acute appendicitis, it is more so in this disease, for rarely without surgery does a perforated ul-

cer terminate other than fatally. Ruptured peptic ulcer closely resembles appendicitis in its signs and symptoms and is often mistaken for it.

Many men contend that rupture of a viscus without contributing injury occurs only in an organ weakened by a chronic lesion. This is probably true; but under stress of the acute trouble, it is often impossible to elicit a history of long standing. This is partly true in cases of rupture of a peptic ulcer. It is almost inconceivable that an ulcer can progress to perforation without antecedent symptoms, and yet oftentimes the patient and his family assure you that there has never been any difficulty that was attributable to the stomach.

In acute perforation, the patient experiences an agonizing epigastric pain, so severe that it spreads over much of the upper and central abdomen. The pain is constant and so excruciating that even morphin in repeated maximum doses seems to have but little effect. Extreme tenderness and board-like rigidity of the abdominal walls are present. This fixed contraction of the muscles, nature's effort to splint the abdomen, embraces the diaphragm and consequently respiration is short and jerky with a pronounced expiratory grunt. Vomiting may or may not occur. Pallor, cold clammy perspiration, anxious expression, and quick pulse, are likely to be noted.

In considering the question of intestinal obstruction one is dealing with a subject which calls for at least a paper by itself. Consequently, I will not be able to do it justice but can only refresh your memory concerning certain points which must be borne in mind when considering this acute surgical condition. We may define acute intestinal obstruction as any condition which totally occludes the lumen of the intestine, whether it be intrinsic or extrinsic. In the 2 preceding conditions an early diagnosis is certainly of considerable value; but even in a ruptured appendix or perforated ulcer there may be, however slim, some chances of the offending area becoming walled off and the patient finally recovering. However, in acute obstruction, unless it is relieved, death is certain.

The diagnosis of acute obstruction is made from the history, together with the signs and symptoms; usually the onset is rather abrupt; intense pain, intermittent in character, is the chief symptom. The time of vomiting varies apparently with position of the obstruction, occurring sooner when it is high; and there is nothing characteristic of vomiting in obstruction unless it is fecal, a condition which we should seek to forestall. Our one best diagnostic symptom of intestinal obstruction is complete constipation in a patient who is obviously ill. I say obviously sick for this is often times the deciding factor in making a diagnosis between mechanical obstruction and impacted feces.

Naturally, the first thing to do in considering a case of obstruction is to rule out external hernia. The next step is to ascertain whether there has been any previous abdominal operation. Any operation which has involved intra-abdominal manipulation, no matter how slight, is a potential source of intestinal obstruction. Having ruled out the more or less obvious causes of intestinal obstruction there still remain many cases in which we can only say that obstruction exists and operation is imperative. Once within the abdomen, almost anything can be found as a source of obstruction; always remember that it may be the first symptom of an unsuspected carcinoma of the large intestine.

Conditions from which intestinal obstruction are to be differentiated are: Perforating appendicitis, perforating ulcer of stomach and duodenum, acute pancreatitis, Dietl's crisis, biliary and renal colic. All these may give sudden intense pain, vomiting and collapse, but the distension is not so marked as in obstruction, nor is the pain likely to be so intermittent in character and the vomiting is not apt to become fecal in these other conditions.

The next condition to be discussed is acute pancreatitis. This condition is in reality a comparatively rare disease. In its signs and symptoms it resembles the perforation of an ulcer, and like it the onset is sudden and characterized by intense epigastric pain. Tenderness and muscle spasm are, to a large ex-

ent, confined to the midline and above the umbilicus, and the resulting picture is often spoken of as epigastric peritonitis. In this condition there is frequently a deep lividity or cyanosis of the skin, chiefly noted about the face. As has been suggested, the board-like abdomen of the ruptured ulcer is wanting and the diaphragm is not involved, consequently, the irregular breathing and expiratory grunt are not present.

In considering rupture or gangrene of the gall-bladder, one soon realizes that there is nothing which is in anyway characteristic of the lesion. Possibly one can say in a general way that the onset of symptoms is more gradual than in any other upper abdominal emergency, and that the patient gets sicker more slowly. One is quite apt to obtain a history of previous attacks of trouble referable to the gall-bladder and it is quite true that the condition is an acute exacerbation of a chronic lesion.

The 3 conditions which we will consider next, namely, ectopic pregnancy, ovarian cyst with twisted pedicle, and infected or strangulated fibroid, are, strictly speaking, gynecologic conditions which might justly be excluded in the paper on abdominal diagnosis. Yet all may be inaugurated by severe pain with accompanying shock or collapse in varying degrees. To be sure, the pain, tenderness and muscular involvement are very apt to be confined to the central lower abdomen, but strangulation, either cyst or fibroid, may produce rather diffuse abdominal pain with varying degrees of general abdominal tenderness and muscular involvement.

In these pelvic conditions, one usually obtains his greatest amount of diagnostic aid from the history and bimanual examination. All 3 of these conditions are accompanied by palpable pathology, although to be sure, 2 or more factors may unite to frustrate our attempts at palpation. What we have said of ectopic pregnancy refers to the condition before rupture takes place. After rupture, the picture is one of internal hemorrhage which, with the other signs and symptoms present, usually allows a very accurate diagnosis. Our

chief difficulty lies in making a diagnosis of ectopic pregnancy before rupture, and the most common pitfall is a chronic inflammatory tube. Between these 2 conditions if a man makes a correct diagnosis of ectopic in 50% of his cases, he is doing rather well.

Diverticulitis of the sigmoid, mesenteric thrombosis and inflammation of Meckel's diverticulum are uncommon lesions and are mentioned only to make our list complete. In these conditions it is almost impossible to make accurate diagnosis and the best one can do is to recognize that a severe abdominal lesion exists and advise immediate laparotomy.

Thanks to modern preventive medicine, typhoid fever is fast disappearing from our midst and with it perforations which occur in 2 to 3% of the cases. It is sufficient to remember that such a condition is possible. Fortunately perforation usually occurs during the third week of the disease, a time when the diagnosis of typhoid fever has been firmly established. The only characteristic is sudden severe pain in lower right quadrant of abdomen.

I will touch very lightly on a few questions pertaining to the acute abdominal lesions resulting from external trauma, but will exclude penetrating wounds.

The abdominal organs may be divided, in a general way, into 2 classes, solid and hollow organs. The first class will include the liver and spleen, while the second embraces the stomach, urinary bladder and intestines. It is obvious that blows upon the abdomen will react differently upon these classes. It is much easier to injure a solid organ than it is to damage a collapsed one. The stomach, intestines and urinary bladder being collapsible organs, are seldom injured by external blows. The liver and spleen, being friable, as well as solid organs, are most easily injured, but traumatic lesions in these organs are by no means common.

The liver, spleen and stomach are extremely well protected by the ribs and have the yielding diaphragm as a bumper. The urinary bladder also has a rather complete bony protection within the pelvis. The intestines,

being collapsible, loosely attached and overlaid by heavy muscles, are well guarded. The only closely attached portions of the intestines, the ascending and descending colons, are deep within the abdomen and separated from the abdominal wall by coils of freely movable intestines. The type of blow which causes injury to the liver and spleen, differs from the type which causes rupture of the intestines. The former is usually from an object which extends its force across the entire upper abdomen, while the latter is from one which exerts its force over a rather limited area. The old simile is a rather apt one, that if a man receives an intra-abdominal lesion from striking forcibly across a plank, he will have an injury to his liver or spleen, while on the other hand, if he strikes forcibly against the end of the plank, he will have a rupture of the intestines. It is seldom that one makes an accurate pre-operative diagnosis of an intra-abdominal injury, but oftentimes he can hazard a very likely one.

Two points may be mentioned in connection with rupture of the spleen. One is, that the alarming symptoms may be much delayed from the time of the injury; and second is noting of "Balance's sign", which may be illustrated as follows. With rupture of the spleen there is profuse intra-abdominal hemorrhage, and the blood settles into the left loin. Percussion will reveal dullness in the left with resonance in the right flank. Now, if the patient is turned upon his right side, the fluid portion of the blood will gravitate to the right, but the large clots will not and dullness persists in the left flank. When the patient is next turned upon his left side, the fluid flows back and the right side is tympanitic. It is oftentimes difficult to even determine that an intra-abdominal injury exists, for when two apparently identical cases present themselves, one may have a lesion and the other not.

I will now discuss the significance of abdominal pain from the medical standpoint. We are inclined to regard all acute abdominal pain as surgical, but of the thirty-odd condi-

tions capable of involving that clinical picture known as the acute abdomen more than 20 are nonsurgical conditions, and it is my purpose now to discuss these cases. First let us discuss acute abdominal pain due to nervous disease. I believe it is a rare occurrence now for patients to be operated upon for abdominal symptoms due to nervous disease. Among physicians it is a matter of common knowledge that tabes dorsalis, spinal cord tumor, and caries of the spine can at times produce symptoms that point to disease of the kidney, liver, gall-bladder or appendix. It is not quite so well known, perhaps, that brain tumor and the so-called abdominal migraine may occasionally be guilty. It seems to me all that is necessary is to keep in mind the fact that nervous disease can, at times, produce symptoms of abdominal disease, and be on the look out for changes in the reflexes, pupils and mental processes.

Let us take gastric crisis of locomotor ataxia, with its sudden onset of severe character, usually located in the epigastrium and radiating to the neck, back, or behind the sternum, followed by vomiting, pallor, sweating, subnormal temperature, fast pulse and cold extremities; it is a clinical picture quite suggestive of ruptured gastric ulcer. However, the history will exclude the symptomatology so characteristic of ulcer, and with a thorough physical examination in which there is found the Argyll-Robertson pupil, the absence of knee-jerks, the locomotor and sensory disturbances, and a normal leukocyte count, we should establish a correct diagnosis and prevent a laparotomy.

Frequently, the first, and for months the only, marked symptom of spinal cord tumor or other forms of spinal medullary compression is pain in the abdomen, occurring perhaps in paroxysms. However, careful search with laboratory investigations will reveal the true pathology. Sometimes tumors of the fourth ventricle give rise to abdominal symptoms, more especially nausea, but occasionally pain before the classical symptoms of brain tumor appear and here again careful examination of

the entire body, including the eye-grounds will prove enlightening.

Now and then, a purely functional nervous disease or one of the psychoses may cause pain in the abdomen. Let us not forget that the fact that we are unable to find the cause of abdominal pain does not exclude the existence of a cause; but in the absence of demonstrable cause it is sometimes necessary to make a working diagnosis of "gastric neurosis".

Next, let us consider chest conditions giving abdominal pain. Here, we have diaphragmatic pleurisy and lobar pneumonia, which in children is often ushered in with abdominal pain, general abdominal rigidity, vomiting, fever, leukocytosis, rapid pulse and tenderness over McBurney's point, a clinical picture identical with acute appendicitis. Our surest way of differentiation is by careful examination of the lungs, for an anesthetic-laparotomy and appendectomy are not good treatment for a pneumonia. One point to remember is that in pneumonia, although there may be superficial tenderness in the abdomen, the deep pressure is well tolerated; also, as a rule, if you have a leukocyte count of over 30,000 you can exclude the abdomen as being the cause.

It is a known clinical fact that individuals with advanced arteriosclerosis have from time to time, paroxysmal attacks of acute abdominal pain, usually in the upper abdomen, associated with vomiting and relieved only by morphin or the inhalation of amyl nitrite. These attacks were once regarded as due to embolic closure, obliteration or rupture of a blood-vessel, but in the light of more recent portmortem observation, they are looked upon as vascular crisis or spasm because no post-mortem evidence of gross vascular lesion is found. These attacks are referred to by many as abdominal angina and their diagnosis is made by the presence of arteriosclerosis, absence of fever, normal leukocyte count, ophthalmoscopic examination of the retina, and the absence of definite signs of intra-abdominal disease, and the relief obtained by inhalation of amyl nitrite. Many of the transient aphasias, hemiplegias and monoplegias are probably accounted for in the same way.

The acute abdomen that occasionally occurs in the course of hyperthyroidism may be mistaken for an acute appendicitis or acute infection of gall-bladder or bile-ducts, and care should be exercised before operating upon these patients as spontaneous recovery is the rule and operation would be dangerous. It seems hardly probable that a careful clinician would overlook a Grave's disease with its tachycardia, exophthalmos, enlarged thyroid, and tremor and yet these gastro-intestinal crises of hyperthyroidism are sometimes mistaken for intra-abdominal disease. However, it is to be borne in mind that an individual with hyperthyroidism may become a victim of acute appendicitis. There is no fever, no increase in the leukocyte count, but usually diarrhea is present in these crises of hyperthyroidism; whereas in an acute appendicitis there is fever, and leukocytosis, and as a rule, constipation.

Acute dilatation of the stomach, with its sudden onset of epigastric distention and pain with nausea, copious vomiting, early collapse, subnormal temperature, fast pulse and scanty urine, is not to be mistaken for an acute obstruction which it closely resembles. In acute gastric dilatation, the vomiting is never fecal and the condition is usually relieved by assuming the knee-elbow position or by the stomach tube or by pituitrin.

Acute abdominal pain, vomiting, general muscular rigidity of the abdomen, fever and leukocytosis are quite consistent with the diagnosis of acute gastro-enteritis and this should always be borne in mind when this clinical picture appears. The season of occurrence, the history of dietary indiscretion, presence of diarrhea and character of the stools and the vomitus should confirm one's suspicion of acute gastro-enteritis.

Mucous colitis is characterized by acute exacerbations in which there is abdominal pain and tenderness and at times stiffening of the abdominal wall in the region corresponding to the part of the colon under greatest tension. At times, there is nausea, vomiting, transitory fever, and a moderate leukocytosis. This, especially when the findings are prominent in the

region of the cecum or ascending colon, bears a marked resemblance to a mild attack of acute appendicitis or a recrudescence of a chronic appendix. The diagnosis is made by the history and the character of the stools.

Children frequently suffer from attacks of abdominal pain (navel colic). In typical cases the pain begins very suddenly and continues during the day but disappears at night. During the attack the face is pale and the eyes are encircled by dark rings. The attack may last a few minutes or several hours. Constipation of a marked character usually precedes these seizures. In every case the child should be examined thoroughly as there is always a possibility of ascariasis, appendicitis and abdominal tuberculosis. The absence of ascarides in the stools strengthens the diagnosis of navel colic. The possibility of appendicitis is excluded if the local findings are lacking, i. e., tenderness and muscular rigidity. As navel colic lasts only a few hours, longer duration of symptoms indicate a more serious affection. The beginning of tuberculous peritonitis is marked by a permanent change for the worse in the general health of the patient, whereas children who suffer periodically from attacks of abdominal pain are ordinarily in excellent health between attacks. Again, children with tuberculous peritonitis react positively to tuberculin, while most children suffering from navel colic react negatively. What causes attacks of navel colic remains to be discovered. It is an open question as to whether they are due to intestinal spasms or to ischemic conditions in the splanchnic region caused by vascular crisis.

Acute pyelitis, when on the right side, may begin with sudden pain in the abdomen with vomiting, fever, leukocytosis and rigidity in the right half of the abdomen. The clinical picture of acute pyelitis sometimes is so much like an acute appendicitis that it is only through a microscopic study of the urine that appendicitis can be ruled out. The urine of every patient with an acute abdomen should be subjected to a microscopic study, for by neglect of this simple examination diagnostic error is not infrequently made.

Dietl's crisis, in which there is a kink in the ureter with the subsequent piling up of urine into the pelvis of the kidney, may be mistaken for an acute appendicitis and severity of the pain and the rigidity sometimes encountered may mislead the examiner. The absence of fever and leukocytosis (and presence of tenderness and probably a tumor of the kidney region) with radiation of pain down the course of the ureter, should denote a renal rather than an intestinal origin of the pain. The same reasoning applies to renal colic.

Acute nonsuppurative cholecystitis, with its sudden onset of hepatic pain and tenderness with defensive rigidity of the right rectus muscles in the upper half of the abdomen, associated with vomiting, fever, moderate increase in the pulse rate and a leukocyte count from 12,000 to 18,000 is to be differentiated from an acute appendicitis that lies high up close to the gall-bladder. This differentiation is difficult and important, as an acute appendicitis demands immediate operation and acute nonsuppurative cholecystitis is not a surgical disease. In the presence of a tumor this differentiation should be made possible by the round edge of the tumor projecting upward in appendicitis and downward in cholecystitis. Transduodenal drainage of the gall-bladder and bile-ducts, after relaxation of Oddi's sphincter by a solution of magnesium sulphate, enables a bacteriologic and microscopic examination of the bile to be made and promises to be a good addition to diagnostic methods.

Cholelithiasis, or biliary colic, usually begins abruptly with severe pain in the region of the gall-bladder, radiating to the right shoulder or neck, with vomiting, fever, sweating, circulatory depression and tenderness in the right hypochondriac region. Occasionally, there is jaundice. Although this is a picture of the typical attack, it is to be remembered that typical colics are few. Any condition that comes in abruptly, requires morphin for relief of pain and leaves the abdomen tender for several days cannot be explained by "acute indigestion" or "ptomaine poisoning" and it is amazingly surprising how frequently these diagnoses are still made.

The genito-urinary men tell us that often an acute retention with an enormously distended bladder may give rise to pain, fever, vomiting, distention and a tumor mass. Laparotomy has been done in such cases. A careful examination and a catheter may save us from such error.

Acute hydramnios causes a sudden intense pain in the lower abdomen, with distention, tenderness and rigidity, followed immediately by collapse with fast pulse, subnormal temperature, etc. This suggests an internal hemorrhage, a clinical picture identical with ruptured ectopic pregnancy; the diagnosis of course is cleared by bimanual pelvic examination.

Acute salpingitis will present a picture so much like a twisted pedicle of a cyst that a differential diagnosis is here difficult as there is not infrequently an acute infection added to torsion of cyst. Immediate operation is demanded in torsion of a cyst, whereas in acute salpingitis operation is usually to be deferred. Bimanual pelvic examination reveals an immobile mass in salpingitis, whereas the mass is movable in torsion of a cyst; and the same thing applies to pedunculated fibroid.

Typhoid fever may give acute abdominal pain. Obviously, I do not refer to perforation. In typhoid fever abdominal pain is frequent, it varies from tenderness in the right iliac fossa to generalized pain. But the slow pulse, leukopenia and positive blood culture differentiates it conclusively from acute appendicitis.

In passing, I wish to mention influenza, which may give rise to abdominal pain, distention and diarrhea; this is called abdominal flue. There are no localized points of tenderness, there is general malaise with fever, the depression and prostration come on very

rapidly. However, the symptoms are out of all proportion to the signs elicited.

In concluding, I want to mention that phosphorus poisoning may resemble acute abdominal disease. Phosphorus may be taken with suicidal intent; rat paste, or match heads may be eaten by children. Often it is impossible to obtain a clear history, as for example when a child has intense abdominal pain, vomiting, and the doctor finds abdominal rigidity and the child very sick, and the mother cannot say definitely that the child has swallowed anything poisonous, the physician must make a quick diagnosis. A laparotomy would be bad treatment. The odor of phosphorus in the vomitus, its luminous quality in the dark, should put the physician on the right track. After 48 to 72 hours, splenic and hepatic enlargement is evident, followed soon by hemorrhages and death.

Plumbism is occasionally encountered in painters, printers, those who drink water which flows through lead pipes, those who use hair dye in which lead is incorporated, etc. Plumbism gives rise to the acute abdomen, but without fever, and leukocytosis, and the diagnostic criteria are: (1) the colic; (2) the lead line on gums; (3) stippling of red blood cells; and later (4) wrist-drop and foot-drop.

I am convinced that in most cases of error, the mistake is made because the above possibilities are not thought of and ruled out. Difficult as this is at times, I believe that in a majority of cases, abdomens will not be needlessly opened if efforts are made to rule out the acute medical condition first.

Perhaps the discussion of conditions which have been gone over to such an extent as those taken up in this paper, is tiresome to most of you; but if this paper has recalled only one forgotten fact, I consider my labor has not been in vain.

In Memoriam

HUNT, Ralph H., of East Orange, a pioneer in anti-tuberculosis and mosquito extermination work in Essex, died June 9, 1928, at Orange Memorial Hospital. He had been ill several months. He was 59 years old.

Dr. Hunt was a former member of the East Orange Board of Health, serving from 1908 to 1917. When the infantile paralysis scourge broke out in 1913, Dr. Hunt made a study of the disease and became a specialist in its treatment.

Dr. Hunt was president of the Anti-Tuberculosis League of the Oranges, with which organization he was identified a score of years. He was one of the organizers of the Essex County Mosquito Extermination Commission and was President during its 15 years of existence. Dr. Hunt was a member of the senior staff of Orange Memorial Hospital.

In 1905 Dr. Hunt became health steward of Essex Troop and served until 1906. He enlisted in the Medical Corps in 1917, and trained at Camp Greenleaf, Fort Oglethorpe, Ga. He was a captain until he went overseas. As a major he was regimental surgeon of the Twenty-second Cavalry and later of the Eightieth Field Artillery. He was in service 27 months and overseas 14 months. He served at the front at Metz. After the war he was commissioned a lieutenant colonel and headed the medical board at Camp Merritt until October, 1919.

Dr. Hunt was born in Camden, Me. He received his N. A. degree at Bowdoin College and was graduated from the Medical School of Maine in 1894. He practiced in Portland 5 years before going to East Orange. He joined the staff at Orange Memorial Hospital and became head of its tuberculosis dispensary. He was a member of the American Medical Association, New Jersey State Medical Society, Essex County Medical Society, American Association for the Study and Prevention of Tuberculosis, New Jersey State Sanitary Association, American Public Health Association and the William Pierson Medical Library Association of the Oranges. Last year he was elected a fellow of the American College of Surgeons.

Dr. Hunt leaves his wife, Mrs. May Williams Hunt; one daughter, Miss May Hayward Hunt, and a brother, Rev. Dr. Walter Reid Hunt, vice-president of the American Unitarian Association, Boston. Rev. Dr. Hunt was for 24 years pastor of the First Unitarian Church, Orange.

ISZARD, William Howard, of Camden, N. J., departed this life on June 26, 1928. He lived far beyond the Psalmist's allotment of years, though yet young in heart, and admired by both his professional confrères and the laity.

Sixty-five of his 86 years were spent in the practice of medicine. He began as a volunteer medical cadet in the United States Army Hospital, in Philadelphia, in 1863, when he was but 21 years of age. He matriculated in the classes of 1863-64-65, at the Jefferson Medical College, but did not graduate until 1870. His preceptors were Drs. S. F. Fisler and T. H. Andrews, of Philadelphia. He began practice on his own account in Elmer, Salem County, N. J., after the Civil War; later he moved to Camden.

Dr. Iszard's interest in public affairs did not cease with the Civil War, for he served as a member of the N. J. State Legislature in 1872-73-74—that is, as a representative of Salem County. He came to Camden in 1877, and a year later, the civic spirit in him being strong and untiring, he was elected Coroner for Camden County, and served 3 years. Later, he served as County Physician for 6 years and 4 months.

During all his public activities Dr. Iszard was a tireless student and practitioner of medicine and surgery. He served as President of the Gloucester County Medical Society, Camden District Medical Society, Camden City Medical Society, and Camden Medical and Surgical Society. He kept up his membership in all those societies, being an honorary member of the Gloucester County Society. He was also a member of the New Jersey State Medical Society, and on one of its standing committees. He held membership also in the New Jersey State Sanitary Association and the Philadelphia Pathologic Society.

It would be hard, if not impossible, to imagine a busier life, and many of us know it was a life spent in the service of his fellow-men. But even this recital is not quite complete, for he was President of the local United States Pension Board of Examining Surgeons, and had as his associates there Drs. Palm, of Camden, and Blake, of Gloucester City. For a while, he was President of the Judicial Council of the Medical Society of New Jersey. Perhaps there were other activities of his, very likely there were, for he was as sincere as he was tireless.

One of his many valuable papers was a published pamphlet on La Grippe, and he was a frequent speaker at medical gatherings.

Dr. Iszard was born in Clayton, Gloucester County, N. J., on April 27, 1842, and was the son of Samuel L. and Bathsheba Iszard, nee Flemming.

He was educated in the local schools and the Hudson River Institute of New York. He leaves one son, William H. Iszard; a daughter, Mrs. G. Louis Meade, of Cleveland, Ohio; and a grandson, Parker Wright Meade, also of Cleveland, Ohio.

• Dr. Iszard needs no monument, and a written epitaph would be superfluous. He has written his own epitaph on the hearts of his fellow-men, and as long as devotion to duty, professional honor, and consideration for fellow-men are esteemed he will be remembered. Our profession has seldom had a man so active as he was, and he will always be an inspiration to all of us.

•

SUMMERS, William J., of Boonton, died July 7, 1928, at All Souls' Hospital, Morristown, where he had been taken the Sunday before with the hope that something more might be done to save him. For a long time he had been in failing health and had been under the care of eminent specialists, but they were unable to effect a cure.

The doctor came to Boonton from his home city of Paterson in October, 1911, and located his home and office in the Holmes Library Building. He was popular and deservedly so, because he was a man of engaging personality and a fine character and while all of those who knew him feel they have lost a good friend, their sympathy at this time goes out to the one who has sustained the greatest loss, his mother, Mrs. Sarah Summers. His father, James Summers, died in Paterson, many years ago.

Dr. Summers was born in Paterson, March 13, 1886. He was educated in St. John's Parochial School, of Paterson, and the University College of Medicine, Richmond, Va., from which he was graduated in 1908. He took postgraduate work in the Postgraduate School in New York City and followed it with one year as intern in St. Joseph's Hospital, Paterson, after which he came to Boonton. Besides his general practice, the doctor was physician of the State Firemen's Home and also one of the public school physicians.

Pursuant to a proclamation issued by Mayor George W. Logan, business places were closed from ten to eleven o'clock as a mark of respect to Dr. Summers.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if:

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

THE ANNUAL TRANSACTIONS

As a supplement to the August Journal we are publishing, as usual, the transactions of the annual convention of the State Society. Every member should make it a point of duty to read this detailed report of the year's work, for, no matter how closely he may have tried to follow events during the year, there are many small but important items that will have escaped his attention.

In addition to the committee reports, setting forth every phase of the organizational work, and presenting plans for the new fiscal year, we have the discussion of various features of the proposed new Constitution, which will come up for adoption next year, and under which the society will function in the future. It is highly important that members shall thoroughly understand the new program planned and the conditions under which the proceedings will be conducted hereafter.

The House of Delegates accepted and approved in full the reports of the Welfare Committee, and of the Editor and Executive Secretary, and endorsed the recommendations for extension of the public educational program under direction of the new assistant.

The most vital alteration in the Constitution is that section which disposes of the "Permanent Delegates" and provides that after 1929 each county shall be represented by "Delegates" elected by the county medical society. The apportionment is to be upon the basis of 1 delegate for every 15 members, but no county shall have less than 3 delegates. The new plan seemed to meet with general

approval; it not only brings the Constitution into harmony with the Charter, but it provides for representation on a thoroughly democratic basis. There is nothing in the new plan to prevent any county society from electing as "Delegates" those who have been serving as "Permanent Delegates", or whom it wishes to honor or to elect because of special knowledge of, or ability to deal with, organization problems.

Some modifications have also been made in the manner of choosing the Board of Trustees and in the part that body shall play in conduct of the society business.

The Constitution of an organization, unlike its By-Laws, is a document of fundamental importance and one that should not be tampered with except to meet definite emergency. In order, therefore, that this necessary new document may prove effective in correcting existing difficulties, may modernize a system which we have outgrown, and may serve its purpose for another long term of years, it behooves all members to study the proposed changes and be prepared intelligently to express their wishes while the matter is under discussion.

The Presidential Address, which appears in the Journal this month, is the first of the many important convention papers to be published but we hope to present the others as rapidly as space will permit.

Finally, authorization to continue efforts to improve the Journal and to increase its usefulness to members leads us to promise renewed efforts in that direction.

Medical Economics

ORAL THERAPY

H. Sheridan Baketel, M.D.,

(Copied from *Medical Economics*, January, 1928)

A friend of mine, a physician, has just returned from a long trip by rail. He tells this incident:

Sitting in the club car, he got into conversation with a man who represents our modern type of young, intelligent business executive.

"So you are a physician," said this man. "I have a great deal of respect for your profession, but I think it is slipping pretty badly in one respect."

"I've heard that said before," my friend replied, smiling, "but go ahead."

"Well, that opinion is based on my own experience, and I wouldn't tell you if I wasn't so sure of it. A year ago, I went to my regular doctor and told him I had something the matter with me. I'd suddenly lost my snap and I had a hard time sticking to the desk even three hours a day. He looked me over, and I guess he did a good job of it, too. Anyhow, he told me I had nothing the matter with me, just needed exercise and so on. I went to another doctor, in fact, I saw about a half a dozen before I quit. They all gave me the same line, and not one of them, mind you, gave me a single pill, pink, brown or white. Not one told me to take spoonfuls of this, that or the other thing. They didn't even sit down and give me a good long talking to and explain things to me, and get me straightened out mentally. They all prescribed exercise and a careful diet—

They were right, understand. I needed just that, and I took it. But what I needed even more was something tangible, medicine, or a lecture, or ray therapy—

Well, a cousin of mine got me into Christian Science. I knew it was largely imagination, but it gave me just what I needed. I didn't go back to my doctors, and I'm not going, unless I get really sick—I'm not a fanatic."

This little conversation in the club car indicates an exaggerated attitude, of course, and in spite of what the young executive said he was certainly not entirely free of fanaticism.

But if the physicians who examined this "intelligent neurasthenic" had only gone just a little bit farther than a mere diagnosis! If they had only taken a more sympathetic at-

titude and explained carefully just what was wrong, mentally, with the patient, perhaps this man's misplaced enthusiasm would have been applied just as actively to medicine.

Most people, as soon as they consult a physician, feel better merely for having had his attention and diagnosis. But with neurasthenics, the modern practitioner, it seems, must deal more thoroughly. If no tangible treatment is indicated, there should at least be the comfort of what we might call "oral therapy." Such a measure will go a very long way toward giving him the material aid he needs.

And the medical profession will have another booster instead of knocker.

Medical Ethics

ENTHUSIASM FOR WORK

(From *Kalends*, Williams and Wilkins Co.)

Sometimes an unexpected discovery is made by a patient scientist, *in his laboratory*, which proves to be of far greater worth than the objective of his *trained* research. Nevertheless the indisputable facts remain that the scientist was *in his laboratory* and that he was *trained* so as to recognize the value of his "accidental" discovery. He was not out in the open spaces seeking to "improve" nature, nor was he in covert places seeking to "improve" the moral convictions of his neighbors.

Behind all the achievements and "unexpected" discoveries of science there is a wealth of infinite patience, toil and financially unrecompensed labor. What then sustains the searchers after truth? What upholds them in the face of failure, non-recognition of efforts, and financial handicaps? The answer is, without doubt, "enthusiasm". Not the effervescent and spectacular enthusiasm which grows cold with opposition, but the *real* enthusiasm which grows warmer when under the fire of ridicule and antagonism.

There is a quality in man that is more definite than that of mere "greatness"—a quality by which the "great" men of history might be judged with some degree of accuracy and set aside in a definite class. And that quality is *human service*. It surely would be of the utmost profit to *really know* who are the men that have given to humanity the greatest service.

Measured by the yardstick of service, it is submitted that no other group of men can begin to compare with the roster which includes the names of the men of science whose "un-

expected" discoveries have revolutionized accepted teachings, added to the comforts and pleasures of life, and who receive no more substantial reward than the self-satisfaction which comes with the inward consciousness of well doing.

Esthetics

TONING DOWN MOTION PICTURES

(From American Medicine, February, 1928)

The motion picture industry constitutes an important industrial factor in modern life. The financial investments are significantly large, but the paramount importance of the industry lies in its popularity and ubiquity. No age has enjoyed the opportunities of such colossal and widespread amusement as is represented now in the movies.

The producers are not unconscious of their responsibility to the tremendous public they serve. The mass of daily and nightly visitors to the moving picture houses are not wholly conscious of the length, breadth and depth of the impressions they receive. There is more than amusement at the movies.

Considering the large proportion of the young who attend the exhibitions on the screen, it is highly important to recognize that there may be very meaningful influences that are affecting and influencing the growing generation. Youth no longer depends upon the written book for such impressions and emotional responses that may be derived, but can yield itself to a screen version that visualizes it, explains by captions and sets the pattern for the emotion to be felt. In discussions on the educational phases of the moving picture industry one only occasionally hears of the profound internal education that enters into character formation. The richest potentials of the screen are in those who sit in front of the silver screen and who find deep response to all the portrayals that constitute the appealing art of the movies.

It is significant, therefore, that the moving picture industry as a whole has become vitally interested in some of the details that enter into the picturization of stories.

According to *The Motion Picture*, Vol. III, No. 11, resolutions have been passed by the Motion Picture Producers and Distributors of America, and the Association of Motion Picture Producers of California, that provide for the elimination of 11 items from the pictures produced by members of the Association. The

elements which are on the last for expurgation involve, profanity, licentious or suggestive nudity, illegal traffic in drugs, any inference of sex perversion, white slavery, miscegenation, sex hygiene and venereal disease, scenes of actual child birth in fact or in silhouette, children's sex organs, together with ridicule of the clergy and wilful offense to any nation, race or creed.

This list represents a very definite effort to purge the movies of certain forms of expressions which are regarded as contrary to the development of "the highest possible moral and artistic standards in motion pictures". Many of the elements which are represented in this list will not be totally banished, but there will be greater care in disguising the references and a larger degree of effort to make them less objectionable. Certainly such a theme as the wilful offense of any nation, race or creed is so inclusive that a large percentage of pictures will have their release dependent upon an interpretation of the word "wilful". Nations, races and creeds are sensitive, in fact, hypersensitive.

The motion picture industry, however, has gone beyond these definite "don'ts" because they have added a list of 26 factors calling for special care in production "to the end that good taste may be emphasized". In this list, however, are many themes which, when produced upon the screen, are powerful for influencing the young, and particularly the emotionally developed adolescents. The list as mentioned merits attention because, after all, it represents a considerable part of what may be regarded as the dramatic incidents of movies. It presents in addition somewhat of a picture of much that goes on in the world that attracts attention and is too frequently played up on the posters to catch the attention of passers by, and to indicate the tremendous thrill that awaits the onlooker within the theater walls.

(1) The use of the flag; (2) international relations (avoid picturizing in an unfavorable light another country's religion, history, institutions, prominent people and citizenry); (3) religion and religious ceremonies; (4) arson; (5) use of firearms; (6) theft, robbery, safe-cracking and dynamiting of trains, mines, and buildings, *et cetera* (having in mind the effect which a too-detailed description of these may have upon the moron); (7) brutality and possible gruesomeness; (8) technic of committing murder by whatever method; (9) methods of smuggling; (10) third degree methods; (11) actual hangings or electrocutions as legal punishments for crime; (12) sympathy for criminals; (13) attitude toward public characters and institutions; (14) sedition; (15) apparent cruelty to children and

animals; (16) branding of people or animals; (17) sale of women, or of a woman selling her virtue; (18) rape or attempted rape; (19) first night scenes; (20) man and woman in bed together; (21) deliberate seduction of girls; (22) the institution of marriage; (23) surgical operations; (24) use of drugs; (25) titles or scenes having to do with law enforcement or law enforcement officers; (26) excessive or lustful kissing, particularly when one character or the other is a 'heavy'."

The passage of these resolutions is not a gesture although the list of "Be careful" suggests that too much change in the mode of picturing these things should not be expected. The resolution merely provides that special care be exercised in the manner in which these subjects are treated. It is to be hoped that the special care will be liberally interpreted even though the end-result may be that some of the films will be less appealing.

Obviously, there is no question that does not affect human character. Moving pictures, however, occupy a preëminent place in our modern educational machinery. Special studies and investigations are being made with a view to determining how and to what extent moving pictures may be of service in school systems, not merely for the presentation of definitely educational pictures relating to history, art, travel, geography and the like, but for the purpose of advancing the ethical development of the school population.

The moving picture industry merits commendation because of its appreciation of its own ethical potentials, even though it may not have made evident its full reaction and thought. Public criticism has been varied and intense, but despite it the industry has grown and it represents a real part of the essential formative material of this age.

The influence of the moving pictures is probably greater than that of any other single modern institution, affecting as it does all ages, all nations, and all races. It reflects the past, it projects the future and it contemplates the present. It speaks through its captions. It persuades and convinces in its pictorial development. It serves to entertain, amuse and educate, to stimulate or depress, according to the time, the place and the individual. It is part of the great machinery of escape which enables many to gain new strength to live. And it is part of the mirror of reality that opens up inner gates and even supports tides of contemplation. Meditation and prayer, strength and courage have come from the movies just as well as many of the unfortunate ideas and emotions for which they have been condemned. This is a movie age. It is well to know in what direction we are moving.

In Lighter Vein

A Pennsylvania man has invented a motor that dispenses with gas. Now let him develop a legislature that does the same.—*Virginian-Pilot*.

Another thing that makes the average man feel very close to Al Smith is that Al's a rotten golfer.—*Ohio State Journal*.

High Visibility.—Wife (putting on fancy dress) —"Oh, bother! They haven't put enough hooks on this costume."

Husband—"Never mind—there'll be plenty of eyes on it!"—*London Opinion*.

Set 'Em Up.—A Los Angeles patrolman had brought in a negro woman somewhat the worse for wear, and the desk sergeant, with his very best scowl, roared:

"Liza, you've been brought in for intoxication!"

"Dat's fine!" beamed Liza. "Boy, you can start right now!"—*Los Angeles Times*.

Two-handed Courting.—"Girls were harder to kiss in your days, weren't they, Grandpa?"

"Well, maybe; but it wasn't so blame dangerous. The ol' parlor sofa wasn't apt to smash into a tree jest about the time ye got all puckered up."—*Catalina Islander*.

The man who takes a nap while holding a steering-wheel usually wakes up holding a harp instead.—*Louisville Times*.

Ever Happen to You?

A customer paused before a counter laden with various kinds of electrical devices. The girl on the other side of the counter didn't act exactly like a member of a reception committee, although she did have her thin cheeks daubed with rouge.

"I want to get a pull-chain socket," said the customer. "I see there are two kinds here—one for twenty-five cents and another for thirty-five. What's the difference?"

"I don't know, I guess the thirty-five cent one's the best," answered the girl, repressing a yawn.

"Are they approved by the insurance underwriters?"

"Are they what.....?" she inquired with languid interest.

He repeated the question—with explanations. "I don't know. They must be all right. We sell lots of 'em," she replied.

He had selected one and handed it to her to be wrapped up. She dropped it on the floor, but finally got it enclosed in a paper bag and returned it to him—with the wrong change. While she was correcting the mistake, he remarked:

"I should think your job would be very tiresome—standing up so much and waiting on so many people."

"Yeah. But I get a lotta kick outa watchin' the dumbbells that come in here to buy."—"Kallends"

Observations from the Lighthouse

THE MIDWIFE PROBLEM

Frequently at medical society meetings, and occasionally where small groups of physicians are gathered, one hears discussions indicating that the midwife constitutes a vexatious problem. We have not been surprised to hear this in the larger cities having a considerable proportion of foreign born women in their population, but in country districts some of the remarks have surprised and puzzled us as to an explanation.

We were, therefore, interested to chance upon an article in the Virginia Medical Monthly presenting a survey of conditions in Virginia as made by a special committee of the medical society of that state. The population of Virginia is, in round figures, 2,546,000, while that of New Jersey is 3,750,000; the number of physicians in Virginia, 2500; the number in New Jersey 3700; in other words, figures in these respects show Virginia in the relation of $\frac{2}{3}$ the size of New Jersey. We do not know how the number of midwives compare, and we realize that other factors, such as agricultural compared to factory industrialism, enter into any comparison of this kind, but perhaps this relative percentage of 2 to 3 may be used in roughly estimating conditions in these states.

Under the title, "Preliminary Report upon the Midwife Situation in Virginia" (Va. Med. Monthly, 54:749, Mar., 1928) Greer Baughman says:

We found that the 2431 doctors of the state reported 68.2% of the 56,583 births; while the 4840 registered midwives reported 31.8% of the births in 1926. There were 1555 midwives of the 4840 who reported no births during the year, while 2052 reported less than 5 apiece. These 2 groups may be looked upon as neighbors or friends who helped in an emergency or who were too old to engage in active midwife work. There remain 1233 who might be considered to be in fairly active practice. Of these there were 20 who delivered more than 50 and only 3 who delivered more than 100.

One of these was located in Lynchburg, 1 in Petersburg and 1 in Newport News.

We found that more than twice as many people live in rural Virginia, that is, in towns of less than 1000 inhabitants, and the country, than in towns of 1000, and in the cities. With the doctors it is exactly opposite, 1624 live in cities or towns of 1000 or over, while only 807 live in towns less than 1000 and in the country. In the cities and large towns there is 1 doctor to 469 people, while in the small towns and the country 1 doctor should have 2079 clients.

Studied from another angle, we found that the area of the cities and towns of over 1000 was 464 square miles, while the rest of the state contains 1736 square miles. With the above facts before us, it seemed folly to advocate extermination of the midwives. The women of the cities would suffer but little, because there are enough doctors in the cities to cope with the situation; besides, the dispensaries, medical students and hospitals take care of many charity cases. In fact, in the cities, except in a few instances, because of local conditions, the midwife is not a factor to be considered. In the country, on the other hand, with few doctors, great distances to travel, and a tremendous obstetric service, much of which would be absolute charity, the doctors would work themselves to death and die broke.

We believe that midwives are necessary at the present time.

The State Board of Health has done a splendid piece of work by reducing the number of midwives in the state from 9000 very ignorant and dirty creatures, to 4840, only 1233 of whom are really active. Most of these women have the rudiments of cleanliness, if nothing else. Some few of these women are really competent.

The preference of women to act in the capacity of accoucheurs has a long and honorable history. It is only in recent years that men have attempted to preempt this field of practice. When I studied obstetrics, a very elaborate technic was described, by which one could catheterize a woman during delivery under a sheet without exposing her. We were also instructed in methods of examining the women and delivering while the vulva was draped. On the continent of Europe today, normal deliveries are done by well-trained midwives, while the doctor is called in only for a serious emergency.

This problem is an economic one as well. The doctor has not the time to sit on a normal primipara for 24 hours to the neglect of his other patients without adequate remuneration. The midwife, who frequently is a neighbor, is willing to spend her time for the prominence that it gives to her in the community, for the friendliness that she has for the neighbor, as well as for a chance to recount or hear the latest gossip, and will consider herself well paid if she receives only her meals.

The solution of the midwife problem is along the lines that the State Board of Health has already started—to try to educate the public as to prenatal care by means of courses of instruction.

We wish to go a step further and urge the establishment of dispensaries at strategic points over the state in general, or private hospitals, where one of the local doctors can meet the pregnant women who have been drummed up by the county health nurse, examine them, their urine, and give them instructions as to the way to live during their pregnancy. A woman with good prenatal care is more than half delivered.

The toxemias of pregnancy associated with convulsions will account for about half of obstetric deaths. The cases that attend our dispensary do not have convulsions, because we take the albumen and raised blood pressure seriously, treat them, and deliver prematurely if necessary. Prenatal care will do more than reduce the obstetric mortality; it will gradually do away with the midwives by teaching the people that the doctor can relieve them from death and discomfort.

The feeder for such a dispensary is a high-grade county nurse, who will be careful to solicit only those women who have no doctor.

The pathologic cases will, before long, come to the hospitals or be treated by local doctors. It will be but a short time before the normal cases will be seeking hospitalization, or will demand medical delivery.

The full-pay cases can take care of themselves; the half-pay and the indigent cases are the problems.

If a definite problem and a method of solution are presented to a community, the money for carrying out the plan will soon be procured.

Churches are erected in the poorest of communities to save souls. Hospitals will be erected and maintained to save their bodies and to make the future citizens healthy.

Maternal Mortality

That the medical profession is not entirely blameless for the continued high maternal mortality in this country, and that comparison of mortality statistics relating to obstetric care under the direction of physicians with those of midwives does not give us cause for any great degree of satisfaction, is indicated in the Journal A. M. A. (89:2016, Dec. 10, 1927).

S. Josephine Baker, in that article, says:

"The United States holds at present an unenviable position with regard to its maternal mortality rate. According to the latest available statistics, this country ranks nineteenth among the twenty nations of the world which can offer data on this subject. The only civilized country that shows a higher death rate among women from accidents and disease incident to childbirth is Chile. Moreover, the maternal mortality rate in the United States is one-third higher than that of England and Wales and more than twice as high as that of Denmark, Italy, Japan, Netherlands, New Zealand and Sweden. Even allowing for possible doubt as to the entire accuracy of the statistics from the countries studied, and taking into consideration the varying methods used in computing these rates, it is evident that the present obstetric practice does not assure to the women of this country the safety which they have the right to demand and which we should be ready and able to give.

The situation in this country in this regard has not shown any evidence of improvement during the last 10 years. There is reason to be proud of the advance that the science of medicine has made in other directions during the past decade, and certainly the knowledge and the technic of obstetric procedures have been increased and improved. It may be assumed, I think, that we possess all the information regarding the proper practice of obstetrics that is common in any other country, and yet the United States today comes perilously near to being the most unsafe country in the world for the pregnant woman as far as her chance of living through childbirth is concerned.

It is therefore desirable that we should attempt to make a definite study of the present situation and to determine, if possible, where the fault lies. The proportionate causes of puerperal deaths give the first and most important clue. In the death registration area of the United States during 1921, more than 40% of all maternal deaths were due to puerperal septicemia. We are agreed, I am sure, that the researches of Oliver Wendell Holmes, Pasteur and Semmelweis have proved that this is a purely preventable condition, and that with proper obstetric technic the maternal death rate could be at once reduced by 40%. Twenty-seven per cent. of maternal deaths are due to puerperal albuminuria and convulsions—a condition that in the present state of medical knowledge may be held to be at least partly preventable. The same assumption is fair with regard to the 10% of maternal deaths that are due to instrumental delivery and surgical procedures including cesarean section. The remaining 23% of the maternal deaths are due to what are called the accidents of pregnancy, including abortion, ectopic gestation, puerperal hemorrhage, embolus, puerperal phlegmasia dolens and certain ill defined causes. In view of this analysis of the causes of death, it seems fair to assume that the present maternal death rate could be reduced at least one-half and probably two-thirds if the

methods of obstetric practice measured up to the present assured knowledge of safe procedure.

There have been many reasons advanced to excuse and explain our failure in this direction. Possibly the most prominent one has been that referring to the employment of midwives in many of the states. There can be no difference of opinion as to the danger involved in allowing unskilled, ignorant and often dirty persons to assume the responsibility of obstetric care and the delivery of pregnant women. But even in those states in which they are extensively employed, any final assumption as to their responsibility for the high maternal death rate cannot rest on a casual study of their methods and the extent of their practice.

New Hampshire, Vermont and Oregon all report that 100% of their births are reported by physicians and that there are no midwives practicing in these states. Wyoming reports that 99.2% of its births are cared for by physicians. Yet New Hampshire has a maternal mortality rate of 7.1; Vermont a rate of 6.8; Oregon a rate of 7.2, and Wyoming a rate of 9.0 maternal deaths per thousand live births. All these rates are higher than that of the birth registration area, which is 6.4. Let us contrast the showing of these states with that of 4 others where the percentage of births reported by midwives ranges from 9.4 to 21.7.

Relation of Maternal Mortality to Delivery by Midwives

State	Per Cent Births Reported by Midwives	Maternal Mortality Rate
Minnesota	9.4	5.3
Kentucky	17.7	6.0
Maryland	18.1	5.8
New Jersey	21.7	6.4

These four states have an average maternal mortality rate of 5.9, which is lower than that of the birth registration area and lower than that of the 4 states first considered as having practically all their births cared for by physicians. These comparative data do not show that the midwife can be held responsible as a dominant factor in the present high maternal mortality rate. In this connection it should also be noted that the proportion of births attended by midwives shows a definite decline. The United States Children's Bureau states that a lessening in the number of births reported by midwives is reported by 22 states."

(To be continued)

Communications

INTERSTATE POST-GRADUATE MEDICAL ASSOCIATION

(Announcement received from Edwin Henes, M.D., Secretary)

The Annual Assembly of the Interstate Post-Graduate Medical Association of North America will be held in the City of Atlanta, Ga., October 15-19, 1928. All medical men in good standing are privileged to register, and all are cordially invited to attend.

Dr. George W. Crile, Chairman of the Program Committee, has arranged an exceedingly attractive program. Eighty-two renowned clinicians and teachers from all sections of the United

States and Canada, and from several European countries have definitely accepted places on the program.

A complete program and folder of information will be mailed about 4 to 6 weeks in advance of the opening of the assembly, to all medical men in good standing, as listed in the latest Directory of the American Medical Association.

MILK CONTROL IN NEW JERSEY

Edwin C. Lanigan,

State Department of Health, Trenton, N. J.

New Jersey's progress in milk control is exemplified by a 1927 statute, enforcement of which is a function of the State Department of Health and local health boards. The bureau of food and drugs of the state department has this activity in hand. The department considers the enactment of this law, Chapter 233, the outstanding accomplishment of the past year. The statute provides that no person shall purchase, distribute or sell for human consumption, any milk or cream which has not been pasteurized, excepting milk or cream which has been produced by cows which have successfully passed a tuberculin test within the year of the sale of such milk or cream. The law provides that it shall not be unlawful to sell or deliver milk or cream produced by cows which have not passed a tuberculin test to a person or firm licensed to pasteurize milk or cream, and also provides that it shall not be unlawful to sell or deliver milk or cream produced by cows which have not passed a tuberculin test, if an application for an initial test is on file with the Department of Agriculture of New Jersey.

For the benefit of the purchasing public, the act requires that containers, in which milk or cream which has been pasteurized is distributed or sold, be marked with the words "Pasteurized Milk" or "Pasteurized Cream", and requires that containers in which milk is sold in the natural condition be marked with the words, "Raw milk produced by tuberculin tested cows".

Commenting upon the benefits of the milk control legislation, the department holds: "The enactment of a law prohibiting the sale of all milk or cream which has not been pasteurized, except that produced by tuberculin tested cows, should prove a great incentive for the improving of milk supplies. This is an important protective measure against the transmission of bovine tuberculosis through milk, but it must be emphasized however, that the tuberculin testing of cows and the sale of raw milk therefrom does not protect against other diseases such as scarlet fever and diphtheria, which may be introduced into milk by the handler and thus spread to the consumer. The pasteurization of all milk except certified is recommended."

Enactment of the bill was not accomplished without difficulties. In 1921 the Legislature failed to approve such a measure. It also fell by the wayside in 1925. As a result of a conference in 1926, participated in by agriculturists, milk distributors, producers and control officials, a council was organized. The council approved the bill and the measure had the united support of all organized groups interested in milk control work.

While recommending the use and purchase of pasteurized milk and cream, the department recognizes the fact that it is impracticable at this time to require pasteurization of all milk

because of the economic burdens in certain cases. Another reason is the insistent demand on the part of a certain proportion of the populace for unpasteurized milk and cream.

An idea of the volume of the work involved in milk control may be obtained from the fact that there are approximately 10,000 farms in New Jersey where milk is produced for sale, in addition to 250 milk receiving stations and pasteurizing plants.

REFLECTIONS FROM THE MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

(Letter from Dr. W. Blair Stewart, Atlantic City)

The meeting of the Minneapolis session of the A. M. A. is now history. New Jersey was represented in the House of Delegates by Philip Marvel (alternate for John Hagerty), B. S. Pollak and W. Blair Stewart, all of whom attended every session. The medical profession of Minneapolis, St. Paul, and the Minnesota State Medical Association had perfected all arrangements for the comfort and entertainment of the near 5000 visiting registered medical men, their wives and families. Weather conditions were ideal, Minneapolis at her best; royal entertainment; and one of the most pleasing and successful of the meetings of A. M. A.

The Secretary's report showed an enrolled membership (April 1, 1928) of 96,443, a gain of over 2000 during the last year. We have 62,487 Fellows in good standing. Reference was made to the multiplicity of medical organizations in the United States, many of which are running counter to and duplicating the work of the A. M. A., and doing much to detract from loyalty. There are 3142 counties in the United States, of which number 2068 have organized medical societies. The question of relief for old and needy physicians and the propriety of the A. M. A. establishing a Home for them was discussed. For the present it was deemed best to allow each state to look after any such. A special committee will be appointed to make a thorough canvass of the country with the aid of the County Societies and Women's Auxiliaries to the end of listing the number of our profession who really are in urgent need of help on account of failing health or age.

The triennial apportionment of Delegates was approved on a basis of 775.8, which will give New Jersey one more representative, or a total of four. Several minor changes were made in the Constitution and By-Laws to strengthen and clarify some moot points. The various Journals published by the Association show progress and a healthy condition. The A. M. A. Directory was reported self-sustaining this year for the first time. The various Councils, Boards and Committees reported exceptional activity in Public Health Instruction, Radio Broadcasting, Periodic Health Examinations, Educational and College Work, Medical Legislation and Scientific Research.

The various resolutions on alcohol and prohibition were "side-tracked" by the Board of Trustees. The report on Grading Nursing Schools showed much work accomplished and the committee was continued. A very important communication from the National Grange was read and freely discussed. Complaint was made of the paucity of medical doctors in rural communities and statistics were given of hundreds of towns and districts where not one medical man was available. As the old physicians are becoming de-

crepit and incapacitated the young graduates will not come to take their places. The Association was asked to give this serious consideration and try to devise some means whereby this situation shall be relieved. Excuses of all kinds were given but most centered about the long, expensive, high technical training required; men trained almost exclusively along laboratory lines who are helpless when thrown on their own resources; specialism that renders men capable on a one-track mind only; and the unwillingness of young medical men to sacrifice the so-called "advantages of a great city". The question will be seriously studied.

Suggestion was made that preliminary education should be along English, historical and more liberal education lines and upon a less technical, one-sided, specialized line. Also that one year should be saved to men preparing for practice and, in place of wasting 3 months or more yearly in vacations, that the College medical curriculum should be established upon 4 periods each year, thus completing the full allotted time in 3 years. The subject is being studied carefully by the Council on Medical Education. Unless some method is soon established the Grange intimates that it will be compelled, for self defense, to take steps looking to some immediate relief to their unprotected people.

Announcement was made that the time was about ripe for the A. M. A., in its study of the hospitals of the nation, to make its own classification and ask the various State Boards of Examiners to recognize it as their standard. The next place of meeting, for 1929, will be Portland, Oregon. Dr. Malcolm LaSalle Harris, Chicago, was made the new President-Elect, Dr. Wm. S. Thayer, Baltimore, President, and Dr. W. A. Jones, Minneapolis, Vice-President.

The Exhibits were displayed in the New Convention Hall together with the Scientific Exhibit and Registration Booths. The Scientific Sessions were on a par with the best and presented subjects in all branches of medicine and surgery. One can not attempt even a brief summary of the good things read and discussed. The one outstanding subject seemed to be "Liver and Liver Extracts". No less than 11 papers were devoted to these subjects but comparatively nothing really new was presented. It was pointed out that caution must be exercised in too free liver feeding and that only properly selected cases should be taken, as real harm can be done in overdoing this new method. This is particularly so with the use of the various extracts.

One cannot be otherwise impressed than that the Minneapolis session was a great success and a credit to all who played their parts in staging a most enjoyable and successful meeting.

PROSECUTIONS BY STATE BOARD OF MEDICAL EXAMINERS

(Letter from Dr. Charles B. Kelley, Secretary, State Board of Medical Examiners)

The following is a list of the Board's prosecutions since our last report:

John De Francisco, druggist of Lyndhurst, N. J., pleaded guilty to practicing medicine without a license and paid the penalty.

David Tepper, a druggist of Lyndhurst, N. J., pleaded guilty to practicing medicine without a license.

Annie Lord, a naturopath of Atlantic City, was

found guilty of practicing medicine without a license.

Leo A. Green, a druggist of Red Bank, paid the penalty for practicing medicine without a license.

Charles Geiger, an electro-therapist of Paterson, N. J., paid the penalty for practicing medicine without a license.

John P. Field, an unlicensed chiropractor of Newark, N. J., paid the penalty for practicing medicine without a license.

Rudolph E. Brandman, a licensed osteopath of Hoboken, N. J., paid the penalty for practicing medicine without a license. This was a second offense.

Carmelo Pattelo, a druggist of Jersey City, paid the penalty for practicing medicine without a license.

Bernard Katsin, a druggist of Red Bank, paid the penalty for practicing medicine without a license.

George A. Boyer, a chiropractor of Camden, N. J., pleaded guilty to a charge of practicing medicine without a license.

Clyde H. Faust, a chiropractor of Collingswood, N. J., paid the penalty for practicing medicine without a license.

Frank E. Gaige, a chiropractor and naturopath of Milford and Phillipsburg, was found guilty of practicing medicine without a license and took an appeal to the Supreme Court.

Frank L. Fischer, a licensed chiropractor of Newark, N. J., was found guilty of practicing medicine without a license.

Rocco Trillo, an herbalist of Camden, N. J., was found guilty of practicing medicine without a license.

Vincenzo Nuzzi, an herbalist of Camden, N. J., was found guilty of practicing medicine without a license.

Victor I. Chestnut, a druggist of Camden, N. J., pleaded guilty to practicing medicine without a license.

Loring S. Strang, a druggist of Camden, N. J., pleaded guilty to practicing medicine without a license.

Walter D. Shuler, an unlicensed chiropractor of Audubon, N. J., paid the penalty for practicing medicine without a license.

Lay Mirror Reflections

ULLMAN WRITES PLAN TO WEED OUT QUACKS

Deputy Attorney General Urges Court Aid in Ridding State of Illegitimate Physicians
(New York Times, June 18, 1928)

Deputy Attorney General Sol Ullman advocates greater coöperation by the courts and all governmental agencies in making the Medical Practice Act more effective against illegitimate physicians, in an article published in the current issue of *The Panel*, organ of the Association of Grand Jurors of New York County.

"Though the Department of Education, through the officials mentioned in the Medical Practice Act, has diligently endeavored to weed out all illegal practitioners and to revoke the licenses of physicians who are guilty of misconduct," Mr. Ullman writes, "yet conditions are such that evil doers will continue to resort to medicine as a

fertile field for unlawful gain, unless all arms of the administration of justice in the State of New York properly and timely cooperate.

"Such cooperation can come principally from the courts of justice. A Justice of the court, on finding a litigant guilty of perjury, sends the record to the District Attorney. He also sends the record of a case tried before him to the Bar Association where the lawyer has been guilty of unprofessional conduct. Just so should a Justice promptly report to the Education Department the 'crooked' physicians or illegal practitioners who have appeared before the court in any guise."

Medical Book Reviews

Department Director, Royce Paddock, M.D.

"RADIUM IN GYNECOLOGY", by John C. Clark, M.D., and Charles C. Norris, M.D., with a chapter on Physics by Gioacchino Failla, E. E., M. A., D. Sc.

(Reviewed by Ernest A. May, M.D.)

To write a book on radium and x-ray therapy is timely. Radiotherapy now is holding a firm position among the valuable therapeutic agents in medicine. It was in gynecology that the pioneers of radiotherapy gathered their first experience. Today, in the treatment of most conditions a combination of radium and x-rays is employed with advantage. For this reason the book deals with the treatment of radium as well as by x-rays. There is a highly interesting chapter about the history and physics of radium, written by the well known physicist, Gioacchino Failla. Even a physician who does not like much to read about physics will find this chapter very instructive. The laws governing the action of radium are explained in a very clear way and only the most necessary formulas are mentioned. After discussing the biologic action of the rays on tissue, the authors deal with the clinical part, which is illustrated throughout with excellent pictures of microscopic sections. There were 1119 cases of malignant growths treated. The authors discuss at length the different conditions from every angle of surgery and radiotherapy. Carcinoma of the cervix, as the most frequent condition, receives the most careful attention. Besides malignancies, the authors also describe the treatment of nonmalignant conditions such as myoma, cervicitis, dysmenorrhea, sterility, etc.

The book is to be recommended very highly to the specialists as well as to the practitioner. The authors emphasize also the fact that those who attempt to employ radiotherapy with insufficient knowledge and experience are likely to do much harm; as are those who treat malignant neoplasms without having a sufficient quantity of radium available—10 cents' worth of radium may do a million dollars' worth of injury.

"AN INTRODUCTION TO THE PRACTICE OF PREVENTIVE MEDICINE". J. G. Fitzgerald, assisted by P. Gillespie, H. M. Lancaster, with chapters by A. Hunter, A. H. W. Caulfield, J. G. Cunningham and R. M. Hutton. Second edition. St. Louis. The C. V. Mosby Co., 1926.

Preventive medicine in practice is held out alluringly to student and practitioner by this book which, for the purpose of introducing the reader,

furnishes a fairly complete survey of about 700 pages. In the words of the author, "the time has arrived when in a much larger measure, physicians in general practice must become integral factors in the public health program". The whole field is reviewed by Dr. Fitzgerald and his associates, of Toronto, in order to point out to the practitioner where his opportunities lie.

The field is rather sharply divided for the doctor into 2 large divisions. The greatest of these at present is worked mainly by the state or charitable organizations supplying free clinics for those who cannot afford to pay for the preventive services of the private doctor. More concretely, these consist of antenatal supervision, home visitation, infant welfare stations, and are followed by school and college health supervision and (for the future) clinics for periodic health examination of adults. This does not include the control of communicable diseases in which the practitioner plays his part. The other field directly concerns the practitioner, who may or may not enter the first field by working in the clinics mentioned. His field is his office, and his patients' homes, where he may apply the principles of preventive medicine as outlined in this book. In neither of these fields should any compulsion enter but rather the same principles which now govern the relation of doctor and patient in clinic or private practice. Thus the nationalization of preventive measures is not endorsed but through this relation between 2 individuals the measures may better be adapted to the patient's need.

The author then begins by considering the preventable causes listed in the annual death rates. Since these are largely the communicable diseases, they are then treated under separate headings in what appears to be the most compact and concise portion of the book. By its conciseness and the definite practical directions it contains, this portion treating of the natural history and control of communicable diseases is made very helpful to the practitioner.

Naturally, diphtheria and scarlet fever are completely presented, with especially plain directions for the urgently needed cooperation between physician and laboratory. Tuberculosis is shown by diagrams and statistics drawn from many authentic sources, and includes an account of antituberculosis organization which gives a very good picture of the means of handling the various stages beginning with suspects and contacts. Pneumonia is spoken of as "highly communicable" and immediate isolation advised. The section on water-borne diseases shows the definite progress already made, and the insect-borne diseases are given space adequately for their tropical and sub-tropical importance. Venereal diseases are briefly presented, followed by a well-deserved account of tetanus, gas gangrene, anthrax, glanders, and erysipelas as malign infections through the skin or mucous membranes. This excellent portion of the book concludes with a general chapter on the control of communicable diseases which is entirely practical.

The sections on water, milk, foods, and dietary factors which follow are also made very plain, the sections on milk being especially complete and well illustrated. While the reviewer is not qualified to be critical in sanitary subjects, the chapter on domestic and community sanitation is superficially, at least, adequate. It is certainly well arranged and illustrated.

For the remainder of the book, a contrast is noted. Beside the concise and practical portion

which forms the first two-thirds, it appears more loosely arranged; the 2 chapters on air ventilation, and industrial hygiene, alone carrying on the extremely practical manner of the earlier part. There is a reason for this change. As brought out in these pages, public health activity originated during epidemics, and only later became continuous. The newer and less dramatic fields of endeavor, such as the maternal and infant hygiene which are treated in this portion, are the younger and more larval forms of its activity.

Yet the author feels that in this particular field, maternal and infant hygiene, the way to the future development of preventive medicine lies. A few points brought out are noteworthy. From the comparative statistics of different nations, not infallible, of course, it appears that the United States shows one of the highest maternal death rates and one of the lowest infant death rates. This finding is sufficiently striking to start a wide extension of antenatal care organization especially in rural and semi-rural communities. Among the factors in infant mortality, too, the author stresses the first month of life, when the family health, and wealth, not to speak of wisdom, or the reverse of these essentials, are thought to be the ruling facts which make or destroy the proper care necessary for mother and child. While the combination of gastro-intestinal, respiratory, and epidemic diseases, the latter including whooping-cough and measles, still loom large in infant mortality figures, the deaths in the first month, from natal and antenatal causes, are by far the most dangerous component of the hazards of the first year.

To meet the preventable causes of maternal and infant mortality, the usefulness of the public health nurse is strongly stressed. Children's health conferences are also warmly recommended as practical demonstrations for the promotion of child hygiene. In these conferences, no medical advice is given, but defects are brought to the attention of mothers, who are directed to physicians or clinics. In connection with school hygiene, the author criticizes the tendency to place too great reliance on tables of weights in judging malnutrition. Underweight itself is not a final criterion of malnutrition.

In regard to the private practice of preventive medicine in his own office, the physician is expected to impart personal and public hygiene to his patient as part of his work. In this way he supplements the efforts of the full-time public health worker. Careful case records are a necessity for adequate health service. The author states: "The physician must examine patients coming for periodic health examinations carefully and thoroughly. They should be encouraged and not treated with amused tolerance. Even patients with a tendency to magnify their own minor ailments will benefit by a complete examination and some sound advice on how to live a normal healthy life. * * * Prevention and treatment should go hand in hand whether in hospital or private practice."

The concluding chapters cover the general considerations of vital statistics and public health organization and education. The book is especially noteworthy for its attitude of appeal to the practitioner and offer of increasing his opportunities in the community. It is very well furnished with about 100 statistical tables which show what they are intended to show, and is well illustrated and documented with the forms and blanks which make up such a large part of public health organization.

Current Events

TRISTATE MEDICAL CONFERENCE

The ninth meeting of the Tristate Medical Conference was called to order at 10 a. m., June 2, 1928, at the home of the Philadelphia County Medical Society, 2046 Spruce Street, Philadelphia, by Dr. Arthur C. Morgan, President of the Pennsylvania Medical Society. Those in attendance were:

From Pennsylvania: Arthur C. Morgan, Philadelphia; I. D. Metzger, Pittsburgh; Frank C. Hammond, Philadelphia; Wilmer Krusen, Philadelphia.

From New York: Harry R. Trick, Buffalo; James Sullivan, Albany; Joseph S. Lawrence, Albany; Frank Overton, New York City.

From New Jersey: Walt P. Conaway, Atlantic City; Arthur W. Belting, Trenton; Charles B. Kelley, Jersey City; Henry O. Reik, Atlantic City.

Dr. Arthur C. Morgan: It is a great pleasure to welcome the members of the Tristate Conference to our city and to our County Society Headquarters at this time, and we extend to you a Philadelphia welcome with all that term implies.

The topic for discussion today will be presented in the form of a paper by Dr. I. D. Metzger, President of the Pennsylvania State Board of Medical Education and Licensure.

THE ADMINISTRATION OF MEDICAL LAWS

I. D. Metzger, M.D.,

Pittsburgh, Pa.

In the midst of administrative duties one is apt to lose somewhat his perspective of the larger field of medicine in which others also are working. Meetings of this type in which other viewpoints are presented should, therefore, be of mutual benefit to those who administer the several laws as well as to applicants who are vitally concerned in decisions which affect their immediate welfare. However, the stress of public duties, combined with the professional cares which vouchsafe a livelihood, make it almost impossible to respond to all of the numerous demands for such conferences as these. Several years ago an effort was made to clarify the legal relations between several groups of this conference, with more or less indifferent effect. To enhance the neighborly spirit, without prejudice to any, is my earnest hope and my only excuse for being present today.

It is curious to note how comparatively few physicians appreciate the fact that medical education is but a branch of general education and is subject to the same regulations. The universal aspect of medical education suggests a common legal registration requirement which should have equal value throughout our nation and the world. Singularly, however, it is purely a "state" affair, like all types of educational activities. Because of this fact, all efforts to secure federal legislation to cover uniformly all states and territories have been futile. The convictions relative to "state's rights" are so deeply rooted and the conceptions of the adequacy of certain educational systems demanded by people in various sections of our land are so varied as to make it doubtful if ever a central, federal regulation will be possible.

Each state has enacted laws under which each noble profession is directed and legally controlled, whether it be medicine, dentistry, pharmacy, law, or pedagogy. To attempt to federate any one department of education into a central scheme would open the way to all and eventually readjust the whole educational policy of the nation. The right

to establish their own educational systems has been delegated to the various states and they have guarded this right jealously.

Since each state establishes its laws, neither the federal government nor any other state government may interfere with its administration. Certain regulations may be established which may appear to be at variance with our conception of justice and yet be perfectly logical under the peculiar conditions then obtaining. Sympathy and toleration, with free adaptation where discretionary powers are granted, should therefore characterize interstate dealings, where these variations occur.

The purpose of medical laws, as of all laws of a commonwealth, is to protect the individual citizens of the state. The State Medical Boards have been established to assure this in the healing profession. It is the duty, therefore, of each member of the Board to assure himself that each candidate for licensure is adequately prepared to assume the serious responsibilities of the profession.

The particular points to be noted in any candidate for licensure are his preliminary education, his scholastic professional education and his practical professional education, as required by internship in certain states. The preliminary education can best be evaluated by representatives of the general educational system of the state, and is so done in Pennsylvania. The scholastic professional education is best determined by special inquiry into and personal knowledge of the equipment, the curriculum, and the faculty-personnel of the medical college from which the applicant has graduated. The practical professional training secured in a hospital, most variant and elusive of all credentials, requires specific information on not only the departments covered but also the type of supervision under which the training was received. Unlike a conventional school, no standardized direction of work or gradation of excellence has as yet been made practicable. A system is followed in our state which has been very informing and with frequent inspections can be considered fairly reliable for credential value.

Briefly, the plan is this: Each approved hospital is required to establish a rotational course of training which will be completed in a minimum of one calendar year. This covers the different fields of medicine in such way as to assure a good apprenticeship training in each department with a minimum of disparity in the professional balance. Thus, a comprehensive training may be secured so as to lead the intern to evaluate each department in the light of all, and thus produce a sane general practitioner of medicine. If he desires to specialize, it must be done later, after additional elective internship in the particular line has been secured. In no case shall the fifth year of medical education be an elective one.

To give such a rotational course of internship the hospital must have adequate equipment, a sufficient number of patients in each department, and a staff of outstanding leaders to head-up the various departments. A designated chief in each department directs the work of the intern in his department. He certifies to the superintendent upon a card the type, the amount and the efficiency of work done in a given period. This forms the basis for a permanent record of the intern's work to be consulted at the close of the year and in future years. Eventually the chief of each department signs the legal certificate required of the intern before he may enter the licensing examination or be licensed by endorsement. This credential is countersigned by the superintendent in certification of

the intern's conduct and character as exhibited throughout the year.

It is astounding to find how meager is the information on intern work available in what are otherwise excellent hospitals. Scarcely any detailed information is obtainable, except the record of his presence in the hospital between uncertain dates, especially after a year or more of time has blunted the memory of his co-workers. Recently, a superintendent was compelled to secure from the applicant himself all specific data relative to the work he had performed and the number of cases he had attended. Should this be tolerated in a school? If this year is legally required, it should be made purposeful, definite in its requirements and critical in its records and subsequent certification. The credentials should be as legally submitted and sustained by obtainable evidence as any other document which may be filed in the State Department to support the applicant's license.

The fidelity with which this internship is secured and certified to has been a matter of earnest concern in our state. The administration of this fifth year has greatly increased the work of our Board, but has been the means of assuring not only a much better trained quota of new doctors year by year, but a more alert coterie of workers already in the field. The quickening mental effect derived from teaching others had much to do with developing the splendid research centers associated with the hospitals in many communities in the state. The complete laboratories, under the direction, in most cases, of full-time specialists, have furnished the means for doing scientific work in relation to cases within the hospitals, and have established a suitable environment in which the young graduate may be started to practice real scientific medicine.

In securing this practical training, special attention is directed to certain danger zones in medicine. In obstetrics, a goodly number of cases must be delivered under supervision, with an ample amount of experience in prenatal and postnatal care. In anesthesia, a specific service under supervision must develop sufficient skill to assure safety in administration of the various kinds of anesthetics. In roentgenology, sufficient knowledge of technic must be secured to prevent dangerous experimentation, should the prospective practitioner desire later on to employ this accessory to diagnosis and treatment.

In the laboratory, the Board requires 2 months of exclusive service in which the intern performs the technical work in clinical microscopy, pathologic histology, bacteriology, physiologic chemistry and serology; this must be performed under the immediate direction of a full-time pathologist, or a half-time pathologist and a capable technician. The clinical correlation is made by having the intern carry to the hospital and record on the charts all findings of special requisitions. The policy of permitting a divided service in laboratory work has generally proved to be futile. In this particular requirement, Pennsylvania hospitals are rather unique, and considerable criticism has followed our administration of the same. This technical laboratory experience is one essential factor in developing scientific physicians for future practitioners of medicine. It has been the impetus which has caused the establishment of many miniature laboratories in the offices of splendid, clinical investigators even in rural districts. The laboratory is the key to the scientific activities of the hospital; an alert pathologist may rejuvenate a blasé staff and resolve an infirmary into a research hospital school, provided he is properly encouraged. Such a wide-awake man has many fol-

lowers, not the least of whom are the plastic, prospective practitioners. Thus, in these particular danger lines, a specific service is demanded. Should credentials fail to certify adequately to each, a "check-up" must follow before the documents may be accepted, and this investigation is made in our own as well as in outside hospitals.

If all candidates for licensure came from our own schools and hospitals administration of the law would be simple. The adaptation of credentials to the spirit and letter of the law often presents perplexing problems. Medical schools in the United States and Canada are now quite definitely standardized. Their courses generally are faithfully given and their grades are worthy of confidence. Personal inspection, a very essential factor to accurate evaluation of credentials a decade ago, is not now so important in so far as medical schools are concerned. The exploiter in medical education has become so isolated as to be rather easily discernible. Any infidelity in curriculum function also soon becomes evident. A school approved by the standardizing agencies of our country must now stand four-square or fall.

In hospitals, however, no such reliable standards exist. So many variable factors obtain that it is doubtful whether an adequate standardization ever may be possible. The different types of hospitals obviously limit training to the specific class of cases treated. No limited type of hospital, we think, should be accredited for full service, even though the training extends over a year or more of time. In fact, these or elective services should be discouraged until after a well-balanced rotational service of at least a year's duration has established a thorough conception of the value of any branch of medicine in relation to the whole. Thus we may obviate an eccentric basic training and prevent the development of amateur specialists who are apt to accrue therefrom.

In too many hospitals the intern is required to make his place and find his work. He is looked upon as an essential servant within the hospital, to assist where necessary and whenever called upon, with no outlined program and with little time for reflection and study. He is yet, too often, considered as a high-class orderly who is cheaply maintained. On the other hand, there are some hospitals that are so electrified with the scientific spirit that every moment is eagerly used in following some interesting quest. Such hospitals are led in each department by a chief who quickens his assistant-intern into a ceaseless desire to aid each patient. He therefore develops that sense of responsibility which loyally stands by at all hazards and which baptizes the neophyte with a holy zeal for service—the most essential factor to the safe and sane practice of the healing art. Unless individual responsibility is placed upon some particular chief, no systematic apprenticeship training can be expected. Then the intern practically wastes the year, required of him by law, instead of finding it to be the most valuable of all the years in his professional study course.

The cry comes for more interns. Few hospitals which offer such a systematic course as outlined, and directed by an adequately organized staff, have any difficulty in finding their quota year by year. Any general hospital of 100 or more beds should be able to qualify. Special hospitals and those with fewer beds, we think, should employ on salary a qualified resident. The Board needs to concern itself more in securing a good training for interns than in supplying them to hospitals.

Inasmuch as many candidates for licensure come from outside the state, the problem of evaluating credentials becomes more difficult. As already stated, the scholastic training, being so well standardized, can be determined rather easily. Personal inspection, provided for by our law, serves well in securing assurance in any doubtful cases. The hospital credentials, however, require critical investigation. If our state system shall remain of any value, it must not be vitiated by the acceptance of less rigid demands from hospitals outside the state. Complaints are forthcoming constantly that we give credit for work in hospitals outside of the state which are far inferior to some of our own unapproved hospitals. The eagerness of the Board to minimize neighborly antagonism may give credence to this criticism. Since we may regularly inspect and thus approve or disapprove hospitals within our state, no credit is allowed for any service secured in an unapproved hospital in Pennsylvania. Many have very valuable professional work and no reflection must be entertained as to the clinical services rendered to patients. Many are not approved merely because, for some reason or other, their organizations are not adapted to teaching purposes. The American College of Surgeons has approved about half a hundred within our state which our Board could not under the law approve for intern training.

How then shall we deal with credentials which are presented from a hospital located outside of our state and, therefore, outside of our jurisdiction? Shall we absolutely refuse to give credit for the same? This, obviously, is unfair to the candidate. It furthermore limits our source of supply of valuable physicians. If this rule were made, it would limit us distinctly to candidates from our own state. We do not desire to do this although our yearly supply might make it feasible. The Board established a policy 14 years ago which it has attempted to follow faithfully in relation to all candidates who had an internship in another state or in Canada. The plan is, briefly, to ascertain by questionnaire, by personal inspection, and by any other legitimate means, the type of training received, course of rotation followed, length of time served in each department, method of supervision, type of records kept, fidelity of the intern to his work and excellence of character exhibited during the year. If the record appears to have met the requirements of our law and those demanded of our own hospitals, the credentials are accepted. If any glaring deficiency has been found, it must be covered by supplementary work which the Board can approve. After an ample opportunity for the candidate to support his credentials, we thus decide each case upon its own merits. This policy satisfies each member of the Board as to the applicant's fitness under the law to be licensed. It also has proved to be the only rational method of administering the law. It is the method now followed by most states relative to scholastic education. The method may be followed by other states without prejudice to any, and we commend it as the only reasonable way of evaluating credentials which of necessity vary too greatly to be safely accepted without individual determination.

With malice toward none, with charity to all, we cheerfully welcome candidates from New Jersey, New York, Ohio, West Virginia, Maryland, Delaware, our adjoining neighbors, and from any other state or territory, upon this broad basis, and we hope that candidates from our own state may meet a similar welcome elsewhere.

DISCUSSION

Dr. James Sullivan, Assistant Commissioner for Higher and Professional Education, Albany, N. Y.: I am going to take up this matter from a somewhat different point of view from that at which Dr. Metzger attacked it. Of course, this subject may be considered from 2 angles: from the point of the laws governing education of the physician, and from the point of view of enforcement of laws after a physician has received his training and been duly licensed.

If I were to merely express my personal preference, but in no way committing the profession in New York State, I would say that in the 6 years' training which we require in New York, as compared with the 6 years' training required in Pennsylvania, I would prefer the Pennsylvania method. In other words, I personally feel that the 1 year internship required in Pennsylvania, as it is administered according to Dr. Metzger's recital, is more valuable than the second year of college which we require in New York State as a preparation for entrance to the medical school. That may be attacked by my confrères in New York State; it is merely an expression of personal opinion but I feel that a well regulated internship in the hospital is of more value in the training of a candidate than the second year in college which we require.

Dr. Metzger has brought up some very interesting problems in the matter of education. He has pointed out to us the difficulties in having uniform requirements all over the United States, an ideal which I believe will never be accomplished because of the extent of territory and the variety of demands and ideals of the various parts of the union. As a matter of fact, I think probably progress is greater in the medical profession by reason of this lack of uniformity. I should fear very much the policy which would give over to the federal government the regulation of medicine throughout the country. I have a feeling that such a policy would tend to lower standards in order to make all the laws uniform. However, that is a question which is interesting but not to the point here.

Dr. Metzger has shown us some of the difficulties in the way of meeting this ideal of internship in hospitals. The advantage of it is no doubt very great for it has some marked tendencies. In the first place, it has a tendency to encourage the intern when he goes into practice to continue his laboratory studies and to feel that there is a great deal to be done which he has not accomplished in his preparation for licensure. Whether it would, as Dr. Metzger rather hinted, influence the intern to practice in the smaller communities, I do not know. He did not make that very specific but it might have the advantage of interesting the student to work in a rural rather than an urban community. The greatest difficulty encountered in putting this into practice in New York State is that of hospital control. They evidently have the same difficulty in Pennsylvania. There is a tendency on the part of a large number of hospitals to force approval for internship or to use undue influence in getting their particular hospital approved by the authorities for intern work, not because they particularly want to educate the interns, but because they would like to have some service around the hospital in order to reduce expenses. That condition is found not only in intern work but in the work of nurses. We have in New York State at the present time 139 nurses' training schools; we should have about 60. There is much pressure brought to bear by local authorities, politicians,

senators, executive authorities to bring a hospital into the approved class for nurse training work, not because they want to educate the nurses, which would be ideal, but simply because they would like to have some service to help them balance their budget. I do not know whether that condition, which is a rather human one, is prevalent in Pennsylvania but it certainly is in the state of New York.

As to the testing, we all have our examination system. An examination system is in itself no true test of the capacity of a man. It must be and should be combined with the training that lies behind it. However, it should not be given up for the very reason that it is valuable in conjunction with the training, and training given without testing is just as weak as testing given without training. An examination system if properly conducted can be made a guide to the medical schools which are in existence, just as President Lowell has defended the examination system which still exists at Harvard and in almost all of the eastern institutions. It is a guide as to the kind of instruction which a school should be following if it is to be progressive. Of course, an examination system alone would be absolutely dead. I am sorry to state that the examination system which has been the most progressive in New York state has been conducted by a Board which is not controlled by the Board of Regents. The Bar Examiners have been more progressive in their methods and forms of examination than has any Board under control of the Regents.

One of the great difficulties that confronts us, both in the educational and the legal side of enforcement, is the tendency to rigidity. It is so easy, from an administrative point of view, to take a common law standard, draw a line and simply issue instruction to your subordinates to follow that line and not to deviate by one inch from it. New York State has in some instances been guilty of that sort of thing. It is the easiest way, but just as in law we have Courts of Equity that lessen the severity of the common law, so we should have in our Boards a "court of equity" to lessen the severity of strict and rigid application of any law. We had a law passed in New York State this past year which empowers the Regents to exercise discretion, as a method of lessening the severity of the law with reference to admission to practice of people who are trained in other states or people who have not entirely adhered, because of certain good reasons, to the strict chronologic dates which are sometimes put into laws. The law reads as follows:

"Chapter 537, Sec. I, Par. 51. Supervision of Professions. Conformably to law the Regents may supervise the entrance regulations to and the licensing under and the practicing of the profession of medicine, dentistry, veterinary medicine, pharmacy, optometry and chiropody, and also supervise the certification of nurses, public accountants, certified shorthand reporters, architects, and members of any other profession which may hereafter come under the supervision of the head of the Board of Regents.

The Regents may by rule or order accept evidence of preliminary and professional education, in whatever state or country the same may have been obtained, for licensing a candidate to practice any profession in lieu of that prescribed by the laws relating to such profession; provided it shall appear to the satisfaction of the Regents that such candidate has substantially met the requirements of such laws.

And the Regents shall have further power to endorse a license issued by a legally constituted board of examiners in any other state or country upon satisfactory evidence that the requirements for the issuance of such license were substantially the equivalent of the requirements in force in this state when such license was issued, and that the applicant has been in the lawful and reputable practice of his profession for a period of not less than 5 years prior to his making application for such endorsement. When the evidence presented is not satisfyingly sufficient to warrant the endorsement of such license, the Board of Regents may require that the candidate for endorsement shall pass such subjects of the licensing examination specified by statute or Regents' rule as should be required of the candidate to establish his worthiness to receive such endorsement.

In the event any person whose registration or license in any of the aforesaid professions is not legal or in the event any person who is not registered or licensed because of some error, misunderstanding, unintentional omission, or other cause which the Regents may determine to be excusable, shall submit to the Regents satisfactory proof that he possessed all the requirements prescribed by law at the time required for registration or license, or their equivalent, he may, by action of the Regents, receive from the education department a license or a certificate of facts under seal which may be registered by any County Clerk and shall make valid the previous imperfect registration or shall remedy such failure to apply for or to receive such license, and such license or certificate shall include the date on which such persons could or should have registered or could or should have applied for or received such license, and his registration or license, as the case may be, shall be deemed to have been valid and corrected from that date."

This gives to the Regents rather broad powers. There was one clause which was not put in which I would have favored, giving rather discretionary authority to a Regent, "that these shall be issued with the approval of a Board or with the approval of the examining Board of the profession in which such discretion is exercised". I think there is a danger of that being a little too flexible, for the Regents might sometime lose their balance and give to certain people the privilege of having a license endorsed when the professional board would say no, or the Regents might refuse a license when the professional board would be willing to grant it. I think the professional board is too busy to give advice on such subjects. So much for the qualifications leading up to the privilege to practice.

As to the enforcement, we feel that we made a distinct gain in our registration law. Personally I have not been quite able to understand the arguments of my friends in Brooklyn who were so bitterly opposed to the annual registration law. It gave us something that we never had before, that is the power of enforcement. The legislature will not distinguish between this profession and professions which run all the way down from the medical to the architectural. They will say immediately, why should the state spend money to enforce the law governing the profession of architecture and not spend money to enforce the law governing those who are in the building trade? However, the registration law did give us the money and now we are able to employ a full-time man from the Attorney General's office. The rea-

son we use the Attorney General's office is because we are enforcing a criminal and not a civil law, and the Educational Department does not wish to become involved in the enforcement of criminal laws. By getting a man from the Attorney General's office, putting him in the Education Building, and having him give full time to enforcement of the Medical Practice Acts we are able to accomplish something which we have not done before. The only objection which was very strongly made with reference to medical registration was that some physicians regard it as humiliating to be annually registered; but they have not emphasized that so much as the \$2 fee which they have had to pay. Then, they objected to the nuisance of registering. Of course, any kind of annual dues is a nuisance. Most of the men have considered it an ideal arrangement, but some who have been forgetful and have failed to register have been penalized.

As to enforcement, the Medical Practice Act has included broadly all of the healing professions under the name of Medicine and they are restricted to their particular fields of medicine. The chiropractist is allowed to do just surface surgery, although we had a proposed law this year for permitting osteopaths, who now are required to pass the same examination that the physicians do, to practice minor surgery. I opposed that because I do not know the difference between minor and major surgery and no one else seemed to be able to draw the line of distinction. We have inspectors who give us the evidence on which we base our prosecutions.

We established last year a Grievance Committee which we think is very good. Up to that time the State Board had such a committee, but now we have this special Board independent of the State Board; but only for medicine. There is only one more thing which I feel we should have in the law. We will have to educate the physicians to the idea that when a man becomes a general paralytic or so senile that he is obviously incompetent, we should have a law which will permit us to make him stop practicing. At the present time our Medical Practice Act does not do that, and as a result we have had in some districts a very large percentage of mortality in child-birth, particularly along the Canadian border.

With regard to prosecutions, although this Medical Practice Act has been slow in getting into operation, I think it is justifying itself as the months go by. We are getting rid of the so-called quack, the person who pretends that he can accomplish a great many things which we know he cannot accomplish and who is violating the Medical Practice Act. We had a campaign, as we do with any other law, bringing the greatest amount of pressure upon people who stand sponsor for these unprofessional men. The hardest thing in the world is to say "no" in any administrative office but I have invariably found that you have to come out with a very flatfooted "no", and the man will then say, "I did not expect you to do it but I promised my friend I would come and see you about it". I have said to attorneys—"You really do not want me to give sanction or even to try to smooth the way for a certain thing, do you?" An attorney said recently to his client, "The best thing is for you to obey that law". I feel we are getting respect for not trying to compromise about this law.

Dr. Charles B. Kelley, Secretary Board of Medical Examiners, Jersey City, N. J.: It is with a

dual appreciation that the Medical Board of New Jersey is represented here today. Dr. Belting is President of the Board and I happen to be the Secretary and we felt that the subject under discussion was of sufficient importance to warrant both of us coming to this meeting.

Dr. Metzger's paper has been a very excellent résumé of a difficult task. There is no doubt that administration of the Medical Practice Act is a difficult proposition and becomes more difficult the more conscientiously the job is taken. Its administration in some states is very lax and the task is consequently slight. However, in the states that are represented here today its administration is taken very seriously by all of the officers and, consequently, the laws are well administered. It is also a task that is little appreciated by the general profession.

There are so many points that I might talk upon that it would consume too much time; consequently I will endeavor to present a few specific items which may serve as food for further thought on our part. It seems to me that the most important thing about the Medical Practice Act is its enforcement. A great many of the profession believe that the writing of the law on the book is the important part, whereas the enforcement is really the part of the procedure that is of real importance. The point Dr. Metzger brought out about the Medical Practice Act in all the states being different is, of course, very important. All of the laws are on the books for the purpose of safeguarding us and yet no two are alike. Consequently, in the administration of the Acts of the different states it becomes very necessary for a liberal attitude to be assumed in each state toward the other. It is impossible to follow that line absolutely strictly and, while I will refer to this later, I think that in New Jersey and Pennsylvania the difficulty has been that the Pennsylvania Board has in the past endeavored to follow the line and let the chips fall where they might. The recent ruling of the Regents would seem to me to be an excellent thing, which gives the Board of Regents a great deal of discretion, but even before that law passed there was no difficulty between the New York and the New Jersey Boards. There are several discrepancies which if the laws were administered absolutely rigidly would have caused disruption between New Jersey and New York. When Dr. Downing occupied the position now held by Dr. Sullivan this matter was adjusted. When Dr. Sullivan came in he picked up a discrepancy and a couple of candidates from New Jersey were injected on that particular discrepancy between the two laws. In New York the law requires one year of practice in the state before a license can be endorsed from that state. Several young men have taken the New Jersey examination and wanted to be endorsed in New York. We straightened that out with Dr. Sullivan by writing him that they had in New Jersey one year of internship and the examination was not given until the internship was completed, and they accepted him on that ground. It was just a matter of administering the *spirit* of the law rather than the *letter*.

New Jersey has, we feel, an excellent Medical Practice Act. It was one of the earliest Acts in the country, being adopted originally in 1890, and the present Act was adopted in 1894 and, with a few amendments, is still in existence. It has become particularly valuable because the Courts have upheld it on so many occasions that now

one would be very much afraid to make any attempt to amend the Medical Practice Act because of the danger of spoiling what is already a very good thing. The latest decisions that are of great interest are from the Supreme Court of the state. They have handed down 2 decisions defining chiropractic, osteopathy and electrotherapy, stating that electrotherapy is the practice of medicine and cannot be administered by an osteopath or a chiropractor. That decision was a sustaining of the lower court in 1 case, and in the other case a reversal of the lower court.

While we feel that we have an excellent Act, we think that we could get a nearly perfect one if we could have a few changes. We undoubtedly need first an annual registration law. The Board has been advocating it for a number of years but it has always gone down with defeat as far as the profession was concerned. Last June, at the State Society Convention, the Board presented a report which they stated was a frank appeal for the desirability and necessity of an annual registration law. The House of Delegates endorsed it, although in other years they had twice rejected it. Then, between the time of the Convention and the meeting of the Legislature, the various county societies discussed it; 17 out of 21 endorsed the project; 2 went on record against it and 2 did not vote; 1 county was vigorously opposed to it. There was a meeting held between the State Board and the Welfare Committee of the State Society and this particular county society and, while the Board is still hopeful that we may have an annual registration law, we are not sure of it. The arguments advanced against it were not concerning the payment of the \$2 fee, but the fear that it would give the Board too much power and the thought that if we wanted money we should obtain it from the Legislature, all of which arguments, of course, are not valid, but, nevertheless, they were substantially advanced and the opposition was such that our idea of getting annual registration had to be abandoned.

I personally feel, too, that we should have a clause in the New Jersey law limiting the use of the title "Doctor". There has been an effort in the past to get that but we have never gotten very far. I think Governor Smith's statement at the time that he approved of the Medical Practice Act in New York was excellent. He said that the title "Doctor" should mean what the ordinary person thought it meant—a *doctor*. He summed that up as concisely as any one could.

Another improvement we need is better financing. The New Jersey Board is badly handicapped inasmuch as we get no state appropriation. Both Pennsylvania and New York, I understand, do receive a state appropriation.

My last thought is in regard to the interstate relationship. New York and New Jersey have incompatibilities and yet we are on the friendliest of terms. It is with a great deal of regret that we have to admit that Pennsylvania and New Jersey are not as amicable. Both states require one year of internship in a hospital. The New Jersey Board classifies its hospitals on 4 factors: as to the type of hospital, type of training, what they are prepared to do in the way of laboratory work, and various other essentials. This questionnaire is filed by the hospital. The second factor is the inspection of the hospitals by the hospital committee of the Board. There is no hospital registered in New Jersey that has not been inspected and in several cases reinspected by the Hospital

Committee. The third factor is the rating given that hospital by the American Medical Association. Our requirements are practically those of the American Medical Association in regard to rotational service, the only difference being that we will take a 75 bed institution and the A. M. A. requires a 100 bed institution. The fourth factor is the rating given a hospital by the American College of Surgeons. Only then does the hospital become satisfactory for intern training and we feel that when those 4 factors are satisfactorily determined that hospital is equipped to give an all round intern training. This applies to the hospitals in the state of New Jersey. For those outside of the state we accept the rating of the Board of that particular state. I think that is where the break with Pennsylvania comes. They insist on their own classification rating and consequently interns from several New Jersey hospitals were disqualified by the Pennsylvania Board largely on the laboratory and x-ray requirements which Dr. Metzger has spoken of. Among those hospitals were the Atlantic City Hospital and the Jersey City Hospital. I think Dr. Conaway will probably feel that the Atlantic City Hospital gives a very good general training to the intern. I know the Jersey City Hospital does, for I have been personally connected with it for many years and know the type of training given there. Pennsylvania was straining at a gnat when they refused internships from the Jersey City Hospital and insisted that the training should be supplemented by 2 months training in a laboratory. In one instance one man merely hung around in New York for 2 months to satisfy their laboratory requirements. That meant that recent graduates were being forced into Pennsylvania hospitals and consequently the New Jersey hospitals were suffering from lack of interns. They began complaining to our Board and we began negotiating with Pennsylvania but could make no progress. The New Jersey Board felt that it was manifestly impossible for any outside Board to classify the New Jersey hospitals as well as the New Jersey Board could do it and we asked Pennsylvania to accept our system. They refused and, consequently, feeling that we were unable to classify Pennsylvania hospitals and in order to protect our own hospitals, we had to refuse the Pennsylvania classification. We are sorry that any difference exists and we stand ready to accept the Pennsylvania classification as soon as they will give consideration to New Jersey's classification of our own hospitals. That seems such a little thing that one wonders why it exists. Dr. Metzger possibly answers by saying that their law requires it and that is exactly the point that I am pleading for; that is an interpretation of the *spirit* of the law instead of the absolute *strict letter* of the law. That would make the difference disappear as quickly as snow in the sunshine.

I think we can say that Pennsylvania has become very much more liberal in the last few years. Three years ago when this particular break occurred the breach between us was wide. Pennsylvania, we felt, had assumed a very arbitrary and dictatorial attitude. They have since modified that and have accepted internships from hospitals which they had in the past refused and, as far as I know, the type of internship has not changed particularly. Now, all we are asking for is to have them go a little bit further in their interpretation. We feel that our New Jersey hospitals are in many instances excellent institutions

and that if the Board goes to the trouble of ascertaining the type of hospital, the type of training given the interns, and if we endorse that candidate to Pennsylvania, then Pennsylvania should be willing to accept our classification, or at least to give it consideration. They have apparently modified their stand a great deal. I can appreciate what Dr. Metzger says about being criticized for letting people in from other states. Because some hospital does not give exclusive laboratory work, provided it does give a good training—which Dr. Metzger says is what they want—if we certify that hospital to the Pennsylvania authorities we do not feel that we are asking so much to have them take our word for it. If they will give us some assurance today that they will continue their present attitude toward us, it will be perfectly satisfactory. They are now accepting our interns and if they continue to do so it will be all right. As I understand it, the trouble between the Boards is not something recent. It dates back some years. We are perfectly willing to assume the friendliest kind of relations and I think the whole difficulty between the Boards can be wiped out.

One other point, as to who shall standardize the intern training in the hospitals. I think that will eventually come about by being done by the medical schools; 3 or 4 schools are now supervising the fifth year and if the hospital does not give the necessary training in the fifth year they will not send any more men there the following year. I think that eventually regulation of the hospital for intern training will probably come from the college.

There is nothing personal in what I have said today. Dr. Metzger and I have maintained a very friendly spirit and I sincerely hope all our difficulties will soon be smoothed out.

Dr. Harry R. Trick, President New York State Medical Society, Buffalo, N. Y.: My impression of this particular meeting is that it is one of the most valuable we have had. I do not know any way in which differences can be better ironed out than by sitting around the table and talking as frankly as we have talked this morning. It is apparent that members from New York State cannot enter into the question of difficulties between Pennsylvania and New Jersey very discreetly, but I have felt that this discussion has taken up really 2 phases. It has to do first with qualifications of the recent graduate, and, later, the way the graduate lives up to the regulations in this particular state. Of course, it is quite evident that each community is endeavoring to produce physicians to meet the needs of that section. I presume that is the basic reason for the difficulty in establishing federal control; the needs differ so widely that either some states would be obliged to give up any attempt to meet the standards or others would have to come to a lower standard.

I had the impression that these various standards had their origin in the work of organized medicine, that the medical profession had realized the type of men that is most desirable and for that reason we are determined on certain qualifications in medical schools and certain standards at graduation and in practice. The great difficulty in establishing standards is that it has to do so much with the scientific side of medicine. I have felt with a great many others that what we need is more of the *art* of medicine. Some of the schools and hospitals that Dr. Metzger mentioned that do

not meet with approval of the Pennsylvania State Board have been approved by the American Medical Association and by the American College of Surgeons. Now, the minimum standard of the American College of Surgeons was devised with the idea of the care of the patient, not so much the education of the intern. I know that some of the smaller hospitals can furnish material for development of the art of medicine. Some of these hospitals are over-organized. It is impossible for an intern to see service in all the different groups within 12 months. I do not know how we are to take care of that. Of course, there must be determined a minimum standard. But it has this great disadvantage: We have found that when interns have been through the various laboratory sections they get so accustomed to that sort of work and coöperation that they fear bedside diagnosis and for that reason they do not get far away from the apronstrings of the hospital, and our large communities are overburdened with these graduates while the more remote sections have not enough physicians. We might develop a way of making use of these hospitals to the young physicians, putting them on their mettle, so to speak.

The past administration in our State Society made the attempt to survey the hospitals of the state, not so much from the standpoint of their availability for intern service as for character of work they are doing.

In regard to the difficulties of getting the Medical Practice Act across in our state, we found the same arguments that were mentioned by Dr. Sullivan, the nuisance of registering, occasionally the complaint about the fee of \$2, and the fact that they feel it is a police duty of the state to enforce the medical law in the same way that the banking laws are enforced, and not a part of our work as a medical profession. However, Governor Smith said very frankly that the state had not any money for enforcing these acts regarding professional activities but that perhaps later on the state would take it over.

Dr. Morgan: Dr. Krusen has been a teacher for many years, a hospital administrator and in close contact with the administrative Board and with the human side of the college student. We shall be glad to have a word from him.

Dr. Wilmer Krusen, Philadelphia: It seems to me that these differences between the states of Pennsylvania and New Jersey are not insuperable, that they may all be ironed out by just such a conference as this. It seems to me that this whole question of medical education and internship is such a vital one that the differences are not really very serious among the 3 states. As we all fully realize, we have a fight on in all of our legislatures on medical enactments. We cannot afford to have differences among ourselves when we have a swarm of enemies represented by the cults, the faddists and the antis attacking regular medicine. The representatives of the state medical societies must arrive at definite conclusions and amicable agreements. That is my message to you.

Dr. Frank C. Hammond, Philadelphia, Penna.: There are just one or two phases that appeal to me. Students outside the state of Pennsylvania cannot always get an internship in Pennsylvania and those who desire to go out of Pennsylvania cannot always get a hospital appointment. I have always suggested that they write to the Board to see whether the Board approves before they ac-

cept the internship or consider applying to the hospital for an internship. So far as the state of Pennsylvania is concerned, the Board of Medical Education and Licensure supplies a list of all the hospitals of the state with partial or full internships. The students often complain that the American College of Surgeons approves a certain hospital outside of Pennsylvania while it is not approved by the Board. I would ask Dr. Metzger whether it is a correct procedure to follow, to advise these boys to communicate with the Board before they seek an internship outside of Pennsylvania?

Dr. Joseph S. Lawrence, Albany, N. Y.: I want also to voice with others the opportuneness of a discussion of this kind among the men represented here. I was particularly impressed, as I listened to Dr. Metzger's paper and to the discussions, with the thought that we are concerned primarily with protection of the public. The idea is to guarantee to the public that the man who goes out to practice medicine is fully qualified to do so, and our efforts are really along that line although sometimes they may be interpreted as jealousy or selfishness. If we did not think we had the public support for what we are trying to do we would be willing to modify it.

I could not help but wonder if we had given enough thought to what seemed naturally to be coming about; that is, to the fact that we are really prolonging medical education. There has been much discussion lately, not only here but in foreign countries, about so much being exacted from the young men today before they are permitted to practice medicine. The engineer can go out and be responsible for the erection of enormous buildings and bridges, which may imperil many lives, after a 4 year course. Men are authorized by the state and licensed to practice law, in which the greatest economic conditions are involved, also civil and community rights, with less training than is required for a doctor. Now, when a year's hospital service is required in addition to a 4 years' college course, haven't we actually prolonged the education by 1 year more? I am thoroughly in sympathy with the hospital training but I am wondering whether that might not be arranged in the fourth year medical course. It seems to me that the idea originally, in giving a hospital course, was to give the medical student an opportunity to try himself out in the presence of those who would supervise him. As a matter of fact, isn't the boy today actually leaving the hospital with less evaluation of himself than before, especially in these very large hospitals in the city? I am thinking now of a boy who probably took his course at Albany, where he was under the immediate direction of the chief man on the staff, and he developed a certain amount of self responsibility, but if he goes down to New York and gets into the great machinery at the Presbyterian Hospital for a year, will he come away with as much confidence as before and be willing to set up a practice all by himself? I think that has something to do with the concentration of physicians in the vicinity of large hospitals. I was wondering if, as stated here repeatedly, there are hospitals eminently qualified to give internship but which for some reason or other do not measure up completely. We have a large number of hospitals in New York State that cannot get interns simply because of this method of rating hospitals. If a man went there he would probably get more opportunity and probably be

more capable of taking care of the public who may appeal to him when he begins practice.

There is another influence about a large hospital that may not have been properly evaluated and that is this environment that the student naturally becomes a part of and is affected by to some undetermined degree in association with the specialists who charge large fees. Does he not get an economic diversion or twist there that will influence him? He will see young men who are capable of drawing enormous incomes and he will conclude that is because they are practicing where money is available and, therefore, why should he, a man of equal capabilities, sacrifice himself by going into some small locality and struggling to make a living? He will argue that it will take time but in the end he will be somebody. I know that there were a number of young men in my own class who voluntarily sacrificed a number of years of their lives at the Johns Hopkins Hospital, with no possibility of more than \$500 a year income, simply for the sake of being associated with such men and hoping finally to locate themselves in a good warm nest. If we look at this matter from this point of view we may find some solution to the problem.

Dr. Frank Overton, New York City: I feel that New York State is doing a great deal quietly through the Grievance Committee; just how much nobody has seen fit to publish for certain perfectly good reasons. I think Dr. Sullivan has made the statement that at least 1000 illegal practitioners have gone out of New York State and it is also claimed that one has a hard time to get a chiropractic treatment in Manhattan. New York is doing a great deal along that line but the evidence is not published. Whenever the report comes in about some quack who is practicing we find that Dr. Rypins has known all about it and has been trying to get legal evidence in the case. Dr. Sullivan's department is getting this evidence and the quacks are getting out of New York State.

Dr. Arthur W. Belting, Trenton, N. J.: I want to thank the Chairman for the courtesy that has been extended to the New Jersey Medical Examiners in inviting us here today. Dr. Kelley has explained the situation very fully and I think nothing more need be said regarding the New Jersey Board of Licensure. The New Jersey Board very sincerely hopes for an adjustment of the differences that do exist. It is a splendid thing to have a tribunal where these differences may be presented and adequately adjusted and we hope for something very definite in the way of an amicable solution of our problems which have been presented to this conference. I am sure you are all golfers and when we lose a ball the thing to do is to find it and to do so we go searching along in parallel lines. It seems to me most essential that we should not have our parallel lines too remote. Five nations are now interesting themselves in an effort to find the lost flyers. It seems to me that we must cooperate and get the common viewpoint, not be too divergent, and I am sure you will all agree that if these differences can really be settled it would certainly justify this conference. Our relationship with New York has always been very delightful. We have no desire, personally or as a Board, to lower the standards of medical practice and as President of the Board I hope we will be able to go back with some solution of these problems that will work for the common weal.

Dr. Henry O. Reik, Atlantic City, N. J.: I am particularly pleased with this session today be-

cause I look upon this as something like a medical league of nations, where I would be corresponding to one of America's observers sitting in. I was very pleased with the way Dr. Metzger placed the question before you, and cannot quite fully express my appreciation of the way Dr. Kelley responded in the discussion. I would not have believed it possible for any Irishman to talk so pacifically, and I believe they could, if placed together in another room, settle this in about 5 minutes.

I was a bit shocked to see in the A. M. A. Journal of March 24, "Class A" applied to a few hospitals in New Jersey which I feel sure do not deserve the honor. I am even more surprised to learn today that the Atlantic City Hospital has been on the taboo list. I can speak of it in an independent manner. If I were to judge it from the reports that come through my hands I should have been inclined to classify it as one of the best hospitals in New Jersey. Their pathologic department has a second John Kolmer down there. It needs another inspection, and I hope will receive proper classification.

If it is not possible for the different state Boards to accept the College of Surgeons' classification, or that of the A. M. A., in all instances, and if the Boards have not of themselves sufficient facilities or power to make classifications that each can accept from the other, would it be possible, for instance, for the Pennsylvania Board to accept what Dr. Sullivan might possibly call a Court of Equity procedure, a classification by the medical profession itself? We have in the New Jersey Medical Society a Committee on Hospital Standardization. I think it has not been functioning very actively in the past few years, but there we have available a body selected by the State Medical Society for just such a purpose. Would it be possible to accept a classification coming from the State Society? I offer that merely as a suggestion, as a means of arriving at a satisfactory solution.

Dr. Arthur C. Morgan, Philadelphia, Penna.: I feel that much can be gained, nothing lost, by such splendid contact as has been established here today. The educational side of this question is interesting to the teacher, to the man in hospital work. Dr. Sullivan referred to the police duties incumbent upon all state Boards. That has been subjugated, perhaps properly just now, so that the other phases of our discussion might be paramount, and yet the matter of police duty on the part of these state Boards of Education and Medical Examiners is a very important part of their work. When they take the oath of office they pledge themselves to enforce the police laws as well as the educational laws and in order that our case may be strengthened before the public—and the bar of public opinion is important—it is necessary that we shall see that justice and equity are administered and that men and women who are practicing the healing art illegally shall be taken care of by the police powers of these state Boards. I do not mean particularly the cults themselves, although that thought may be introduced incidentally. I do have reference in particular to glaring inconsistencies upon the part of men and women practicing medicine and who are permitted to carry on their nefarious work in open manner and not called to halt by the state Board whose bounden duty it is to enforce the Medical Practice Act.

It was my privilege a short time ago to direct the attention of the State Board to the fact that

in the telephone directories, particularly in Philadelphia and in Pittsburgh, there are recorded glaring illustrations of this point. The Department of Public Instruction is working very slowly I think, but I hope successfully and logically, but there has not yet come to me any evidence that they have manifested any activity along this line in spite of many illustrations of irregularities in our own ranks. If we can demonstrate to the people at large the fact that we are trying to clear our own skirts, then there will be less criticism when we proceed against the cults.

I want to say that in my work for the past 2 years I have had much encouragement, and I have much hope for the future in the work that has been accomplished by the New York officials in the endorsement and carrying out of the Loomis Act. It was my pleasure to be at the State Medical meeting in Albany and to hear Governor Smith give that very human talk before the medical society. He went into detail as to what it means to use the word doctor. He told us in a very few plain words that if a man or woman claims to be a doctor the public thinks of him in the terms of a physician, not of a cultist, and because they have a Governor who has a human touch and a human sense of appeal they are greatly supported in the enforcement of the Loomis Act. We conclude that much of the riff-raff that was driven out of New York has come into Pennsylvania. We are suffering thereby but are hoping that the moral influence and the moral activity of the enforcement of the Loomis Act will likewise bring a reactive enforcement of the police powers of Pennsylvania's Medical Practice Act so that these unwelcome guests shall be driven further; if to the right and into New Jersey may their speed be hastened and may they land in the Atlantic Ocean even as the 2000 pigs who were plagued drowned themselves in the sea. They cannot go into Ohio because they are prohibited from locating there. The activities of the State Society and the State Officers of Ohio and New York prove that the Medical Practice Act can be enforced in Pennsylvania as well as in neighboring states.

Dr. I. D. Metzger, Penna.: I want to return the same expression of goodwill that has been tendered toward our state by New Jersey. I must, as a member of the State Board, of course, defend the action of our Board. The President of the State Medical Society has just referred to some things which imply that we have not been doing as much as we might have. I want to state first that we are *administering* the law, we are not *making* the law, and in the administration of a law we must comply with that law. While the laws are on the books I cannot, as President of the Board, consistently do otherwise than try to comply with the law. The Pennsylvania Act is exceedingly weak on nonethical practice. We cannot enforce a law against a nonethical practitioner. I sent an investigator to look after a man at a medicine show and to our surprise we found that it was headed by a physician who several years ago had his license revoked because he violated the advertising act which has to do with venereal diseases. After a great deal of consideration, and several meetings, the Board was finally induced to restore his license. Personally, I opposed it to the limit but was outvoted. Now, he is running over the state with his friends and we cannot get him, and that is true of a lot of these people. Because a doctor has an office and advertises himself as a chiropractor, is not sufficient evi-

dence against him and he cannot be arrested. We must secure evidence which holds in law.

We have not done more because of lack of funds. Registration fee was reduced to \$1 and we have only sufficient funds to maintain 2 active investigators for the state and cannot afford to get aid from the Attorney General's office. They have been very gracious in advising us but they say there are no funds available to set aside a deputy to take charge of this work.

Relative to the names of these so-called doctors in the telephone books, we have many of these fellows in Pittsburgh and in Philadelphia listed as doctors who are not doctors. The Telephone Company has promised to revise the list but they are not especially interested, for if a man insists on having his name given as a doctor they will either have to list him in that way or turn him down as a telephone subscriber.

The suggestion made by Dr. Reik, relative to classification of hospitals by the medical profession, I think is very good. That leads to one thing I want to say, and that is that the hospitals of the United States have improved more than any other institution you can think of during the last 5 to 8 years. It is marvelous to me to see the advancement made in all the institutions. The Jersey City Hospital is now giving a rotational type of training, which meets the requirements of the law, to persons whom they know are going to Pennsylvania to practice. They are emphasizing these particular things that we have insisted upon. That is true of the Massachusetts General Hospital and of the Peter Bent Brigham Hospital and of the Johns Hopkins Hospital. The army hospitals also have adopted a course of rotational training, emphasizing particularly laboratory and x-ray work. The National Board of Examiners has insisted that all applicants, if they desire to get a license in Pennsylvania, shall have a rotation of internship. This past week a doctor applied for license who is now a teacher in Vanderbilt University. He had 6 months of internship and did some laboratory and research work for a year, which was accepted by the National Board as supplemental to his internship to complete the year's time. He then applied for a license in Pennsylvania and was told that he could not get in on that internship. This general change in the method of administration in hospitals is one of the best signs that we have on the horizon of medicine. The medical schools are standardized quite well. It is in that element of personal inspection with which our law has constantly come in conflict with laws from other states. The President of the Board was a stickler for that, as you know, and some of us have inherited a good deal of that by training and by the fact that the régime had been built up and had to be followed out in order to be consistent.

In reply to Dr. Hammond's question, I think it is only fair to a student who would like to take an internship outside of the state to have him write to our Board and ask about the matter. We would say to him that the Pennsylvania law requires a rotational type of training in which these specific things are checked up; if you get that training and the supervision has been adequate, there will be no trouble about coming into Pennsylvania; if you are found deficient in certain things we must request you to supplement your work with those particular things.

In the matter of classification of hospitals, that of course, is the whole crux of the thing. Under

our laws we cannot accept a classification made by some other agency, of schools or of hospitals. The law specifically states that it must be approved by the Pennsylvania Board.

Dr. Krusen: I assume you could accept a classification made by some other examining agency in whom you have confidence?

Dr. Metzger: We may accept that, of course. We do not reject an applicant from a medical school just because of the fact that we have not inspected that medical school. If other agencies give a good report of the school and if our Board has not rejected the school, then the Board has the discretionary power to accept the candidate, and that has been done. A couple of years ago I was sent up to Nova Scotia to inspect the medical school there and on that authority I inspected also the school in St. Johns, and we are constantly inspecting hospitals as well as schools and endeavoring to get personal data so that we may intelligently act. I can understand how much easier it is to accept the evaluation of the American College of Surgeons and of the American Medical Association, but, unfortunately, their basis for evaluation is entirely different. The American College of Surgeons regards not so much the kind of training the intern is given, but rather the type of organization in relation to the management of a hospital. The American Medical Association, however, is advocating very strongly a rotational type of service, and yet it approves hospitals that do not have that. The Presbyterian Hospital of New York, which we all recognize as a good teaching institution, gives no obstetrics at all in the hospital training. We have frequently had applicants from there and in practically all cases they have had their training supplemented before making application because they know that is required. The whole point, then, is that under the existing law in Pennsylvania we must assume the responsibility of satisfying ourselves relative to each case. There is no discretionary power there excepting the evaluation of credentials and they must be presented so as to give us the information we want. I am hoping that many more of the New Jersey hospitals will meet the requirements. We must have really gone beyond our rights in accepting some candidates rather than appear not to desire to accept them and thus antagonize other states. I always regret to find a candidate from an outstanding hospital which does not give rotational service. They cannot understand why we require that apprenticeship training when the A. M. A. and the American College of Surgeons do not require it. It is very important because the man who does not want the laboratory work is the man who should have it, and the man who does not like obstetrics should be required to know something about it.

Dr. Lawrence raised the question whether the hospital training does not weaken self-reliance. Certain types of hospital training do. If an intern is compelled to work under a superintendent who tells him each day to do certain things he will not be greatly helped, but where the outline of training is definite and the man is made responsible for the work he has charge of he gains more self-reliance. If the Chief is away, the intern and not the nurse should be made responsible for the patient. If a man is found who does not show a sense of responsibility he is not allowed to take the examination.

Dr. Morgan: Is there any other State Board that has such rigid requirements as Pennsylvania has established?

Dr. Metzger: The state of Michigan has. Perhaps we are going too far. We have accepted the candidates from New Jersey just as we have from other states. Each case has to be determined as to whether it meets the requirements of our law and, in spite of the fact that New Jersey has ruled against us, we have not ruled against them.

Dr. Henry O. Reik, Atlantic City, N. J.: Where you cannot make an inspection yourself, would you accept a report from the State Society if assured that their tests were up to your standard? That occurred to me as a possible solution.

Dr. Metzger: Yes, if the Advisory Board has made those tests we will accept their report. I think the State Board should do that because they have the authority that another body would not have and for that reason I think it should be under legal direction. The Pennsylvania laws are established on this basis of personal inspection and personal knowledge. How do we do about foreign countries? We had last year an applicant from the University of Rome. The Department of Public Instruction satisfies itself as to the preliminary education. It is difficult to do that, if there is a preliminary course of 6 years in which the medical course is included. The evaluation of that is taken in conjunction with the medical work. We require a certification from the University of Rome stating that the applicant graduated at a certain time, and he must also submit the course of study which he has followed. This is visé by the American Consul; a photograph is required which must be identified and certified by the Consul. We do not accept any foreign hospital credentials. They generally do not have them because an intern who goes into a hospital works as assistant to a Chief, then goes to another Chief as assistant and his credentials are not of very great value as far as the whole subject of medicine is concerned. We require them to have an internship even though they were graduated before 1914. We must have some American credentials which we can check up on. That was done under the advice of the Attorney General. We have found 2 cases during the last 3 years where the men had all the credentials but did not know the first thing about medicine when they came to the hospital. We have to check up very specifically on those cases. I do not feel that we shall have much trouble with New Jersey. We have in the past determined each case on its own merits, and must continue to do so.

Dr. James Sullivan, Albany, N. Y.: We must agree with Dr. Metzger because we do about the same thing. We do not, for instance, accept the training given in the Minnesota hospitals and have cut out probably 50% of their hospitals. It seems to me that it comes down to one of the most fundamental things in connection with hospitals. We expect the hospitals to provide the educational facilities that are required. We have hundreds of hospitals in New York State not one of which is registered for nurse training purposes but when we want to run an educational institution we must have them conform to what we require. We virtually have the same thing as rotational training and if we find that a hospital has not the kind of facilities to give the nurse training in surgical, medical and pediatric work, we tell them they must complete their work in some other hospital. I understand Pennsylvania has that same system with their schools. The question of reciprocity comes in. I have always

felt that we have no legal arrangements but a sort of gentleman's agreement whereby we save ourselves trouble, for the training given in Pennsylvania is substantially equivalent to that given in New York, and, therefore, we accept it.

I do not know how to handle the hospital question with reference to this sort of thing. I have almost come to the conclusion that we shall have to do the same thing for hospitals in New York State that we do for schools, that we shall have to call upon the state to subsidize a hospital just as it subsidizes a school, for certainly the hospital service that we give to our rural communities is insufficient. Even with the best of financial management our hospitals are very extravagantly managed. They feel, like a college president, that they always have a public to appeal to in order to make up the deficit.

Dr. Lawrence brought up an interesting question as to the lengthening of the medical school preparation and asked whether any plan could be devised whereby this particular work could be done in conjunction with the medical school course. That is being done. Dr. Squires has rather overthrown the tradition that you cannot have theory and practice going on at the same time. Of course, dentistry is a different thing from medicine, but he has put into operation in the Dental School at Buffalo a plan by which the student is given his theory and his practice at the same time. He has presented all points of view as to the difficulty, the psychologic effect upon the patient in the chair, and in spite of great opposition from the dentists, I think he has proved that such work can be done in a way in which they have not heretofore done it.

Regarding the question raised as to the duty of the state, it is a little difficult in our state to convince the average layman that in all professional laws the state is not being called upon to enforce these arrangements. The architects want to have state enforcement of their rulings, so they put in their preamble "In order to guard the public health"; all of these laws were originally put under the Public Health Laws and not the educational laws. We were enforcing public health laws in the Public Health Department. Recent legislation has made it a part of the educational law of the state. It is hard to convince the ordinary layman in regard to architecture and engineering that you are not really enforcing a "trades union" rule. The undertakers have a law in New York State to put the embalmers under the control of the Educational Department and have them enforce the rules in their trade. Governor Smith said, "Gentlemen, if you expect to get this law through you will have to provide the funds yourself", and we accepted that as a dictum which the Governor himself would follow. That illustrates the attitude of the present Governor. What the attitude of the next Governor may be I do not know, but certainly we are trying to protect the word "doctor". I hold the title "doctor" myself. You all know that it takes longer to get a Ph. D. than to get a medical degree. I have consistently stood against the use of the title "doctor" with reference to any profession other than dentistry, medicine and veterinary. I think the most serious mistake we ever made was to allow the optometrist that title simply because they had been using it.

Dr. Metzger: It is rather interesting that under the Pennsylvania laws as interpreted by the Courts the term "doctor" is not a legal term; it

is a scholastic term only and therefore if a chartered school has granted the degree the man has a perfect right to use it; his doing so cannot be used against him in a trial except as prima facie evidence that he is trying to misrepresent himself through his office and otherwise as being a member of the medical profession. Our law is very deficient on that point.

Dr. Kelley: Several points stand out rather prominently in today's discussion. First, that Pennsylvania has modified its attitude. So far as the young graduate writing to the Pennsylvania Board asking whether a certain hospital outside of the state would be acceptable to the Pennsylvania law, Dr. Metzger said that he would reply to the effect that if the rotational training was given by the hospital, the hospital would be inspected. Three years ago the Board was not writing that way. They said then that the Pennsylvania Board would make no promises as to what their position would be in regard to certain hospitals outside of the state, and that there was no reason for going outside the state for internship. Applicants were told to apply for a list of hospitals approved by this Board. That was one of the chief reasons for our break. We felt that it was forcing interns into Pennsylvania hospitals. I know of 3 cases of Jefferson graduates who would have gone into hospitals in New Jersey had they not received answers to that effect. They wanted later on to practice in Pennsylvania and therefore served their internship in Pennsylvania.

Further, Dr. Metzger says today that it is possible for the Pennsylvania Board to accept the standardization of another agency. That is all we are working for and if they will continue that attitude we will be satisfied.

Dr. Metzger: The question was asked whether this standardizing agency would assure us that the hospitals meet the requirements of the Pennsylvania Board. That is very essential.

Dr. Kelley: We will accept that. Dr. Metzger further stated that a form of the questionnaire and the rating of the A. M. A. and American College of Surgeons would not satisfy them. I added a fourth factor, the inspection of the New Jersey Hospital by the New Jersey Board. There is no hospital in New Jersey that is not fully inspected by the New Jersey Board and we require practically the same essentials that the Pennsylvania Board does. I think there are very few exceptions to the rotational type of training and we are requiring in the New Jersey hospitals just as high standards as the Pennsylvania Board does. The main thought is that there may be some little discrepancy in the absolute letter of the requirements, but there certainly is not in the spirit.

In answer to Dr. Reik, New Jersey was the second state in the Union to adopt the internship; Pennsylvania was first. Inspection of the hospital was originally in the hands of the Hospital Committee; Dr. McCoy is still chairman of that committee. After their work was completed it was turned over to the State Board to carry on. Incidentally, I can say that Dr. McCoy in this particular controversy feels that our State Board is absolutely right in the stand that we have taken.

The last thought is that Pennsylvania is accepting hospitals now that they have formerly rejected. If they will go on maintaining their present attitude we have absolutely no quarrel with them.

Dr. Metzger: I can promise that conditions will continue as they are at present as long as I am President of the Board.

Dr. Henry O. Reik: The State Society Committee has not, I believe, made an inspection for some time. Conditions have changed somewhat in the last 5 years. I think we can give Dr. Metzger assurance that our committee can be reorganized into life and that it will work on a standardization basis that will be satisfactory to both states. If that plan offers any prospect of having the Board do better work than the College of Surgeons or the American Medical Association has done, there should be no difficulty about starting it.

Dr. Metzger: I may state that at the last meeting of the Board studying the Pennsylvania law, it was decided by a majority that the preliminary training shall be 2 years college work and evidently that will be recommended in the final drafting of the bill. Our Board has felt all along that 1 year of college work was perhaps sufficient to comprehend the medical sciences and has not urged 2 years.

Dr. Arthur W. Belting, Trenton, N. J.: I have no desire to complicate matters in what appears to be a very satisfactory solution of this problem except to say that I would like to register my personal opinion that as long as the Pennsylvania State Board of Licensure holds itself out as the best qualified body to rate interns, in like manner the New Jersey Board of Licensure, I feel, is the best qualified to rate its New Jersey hospitals. It is my opinion that members of the State Board of Licensure are the best informed as to the present and future qualifications of medical standardization. Not to speak disparagingly of any other committee, it would seem to me that any committee composed of the New Jersey State Board of Medical Licensure would be par excellence the committee to rate our hospitals. This committee is nonsectarian and its knowledge is based on scientific information.

Dr. Metzger: Does the Board have an outline of your requirements? I would be glad to have it.

Dr. Kelley: This will be sent to any one who is interested.

The Chair requested that a copy be sent to each person present.

Dr. Reik extended an invitation to the Tristate Conference to hold its next meeting in New Jersey, in October or November.

Upon motion of Dr. Lawrence, duly seconded and carried, the program for the next meeting was left to be determined by the host.

Dr. Morgan said there had been some discussion as to whether the former members and former officers of the Tristate Conference should continue to take part in the meetings; expressions had been received from some of the former members indicating a desire to continue as members.

Dr. Reik made a motion that the ex-Presidents of the 3 state societies shall be continued as members of the Tristate Medical Conference as long as they show an interest; which was seconded and unanimously passed.

Adjournment at 1.30 p. m.

HENRY O. REIK, M.D.,
Secretary.

The Woman's Auxiliary

CONSIDERATIONS TO BE KEPT IN MIND BY STATE BOARDS IN PLANNING STATE AND COUNTY AUXILIARY WORK

(1) Suggestions offered by the National Auxiliary to the State Auxiliaries can be only advisory, for the reason that a State Auxiliary should undertake only work which meets the approval of the State Medical Association, and a county auxiliary should undertake only work which meets the approval of the county medical society.

(2) The principal function of the Auxiliary is education of the public in health matters. But doctors' wives cannot educate others until they have first educated themselves.

The first work therefore for the members of a state or county auxiliary should be self-education through reading and through study programs. The first year of every auxiliary's existence could profitably be devoted to education of its own members.

(3) The best field for work is the women's clubs. Doctors' wives should be willing to accept offices and committee appointments in such organizations as the Federated Clubs and Parent-Teacher Associations, in order to carry on health educational work with their members, and, through them, to teach the general public.

Hunterdon County

Reported by Miss F. A. Apgar

At a meeting of the Hunterdon County Medical Society of New Jersey, held at Glen Gardner, July 24, the Woman's Auxiliary was organized. This county puts New Jersey at the head of the national list—100% organized.

You can always count upon Hunterdon County to do the proper thing.

The following temporary officers were elected: President, Mrs. G. B. Tompkins, Flemington, N. J.; Secretary, Miss F. A. Apgar, Oldwick, N. J.

Later, a notice will be sent to the wife of each physician in the county, asking her to be present at a meeting for the election of officers for the year and to arrange a program of work.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M.D., Reporter

Correction

Attention having been called to a statement published in this section of the May Journal which might be misinterpreted, the Reporter desires to clarify it by the following explanation: At the meeting of the Atlantic County Medical Society, April 13, Dr. J. C. Brown reported an "Unusual Case of Dystocia", and in the condensed report of his remarks, on page 390, appears the

statement—"The midwife applied traction to the baby's head, which was finally pulled off the body." This could readily be interpreted to imply that the midwife had been unskillful and had, in consequence, produced an inexcusable result; a meaning which we had no intention of imparting. The facts are, and were so understood by all those present at the meeting, that the midwife's conduct of the case was entirely satisfactory, and that detachment of the head of the baby occurred in the hands of the physician who was called at proper time by the midwife and who was following up her efforts at delivery. The fetus had been dead for a week or more and the tissues were so decomposed that decapitation would attend any effort made for extraction.

We regret that our endeavor to produce a condensed report should have resulted in the imputation of blame to the midwife.

CAMDEN COUNTY

R. E. Schall, M.D., Reporter

In Memoriam

Whereas, It has pleased Almighty Providence to remove from our professional circle Dr. William H. Iszard, the oldest physician in our city, who died at the advanced age of 86 years, after a very prolonged illness;

Therefore, be it Resolved, That in the passing of Dr. Iszard, this society has lost a faithful member and associate, a regular attendant at our meetings, whose parliamentary knowledge was much appreciated.

Be it further Resolved, That we are assembled in special session to do honor to his memory, and cause to be entered upon the permanent records the expression of our grief,

Resolved, That a copy of these resolutions be forwarded to the family of our deceased member, with whom we deeply sympathize in their hour of sorrow.

(Signed)

H. F. Palm
John F. Leavitt
A. H. Lippincott

CUMBERLAND COUNTY

E. S. Corson, M. D., Reporter

A profitable and well-attended meeting of the Cumberland County Medical Society was held Tuesday, July 10, by invitation of Dr. Reba Lloyd Ivy Manor, Jericho, which is an old colonial mansion that has been changed into a well-equipped annex to Ivy Hall, Bridgeton.

Resolutions were passed expressing the esteem which Dr. W. P. Glendon was held by the society and the great loss to the community caused by his untimely death.

Interesting cases were reported by several members. Dr. E. S. Corson read a paper entitled, "Osteitis Deformans". This is a rare disease and but few cases have been reported in medical literature. Only one member of the society reported having seen a case. Heredity plays an important part in its etiology. The patient, male, age 53; mother suffered from the same disease right radius; Wassermann negative; first had involvement of left tibia, which grew rapidly in size, giving lateral and anteroposterior curvatures the elongation, throwing the body out of plumb,

and giving the characteristics of an aged man. The roentgenogram showed distinct striation of the bone lamina and eburnation with nodules on the crest of the tibia. A tumor developed in the upper lateral region of the right thigh, causing considerable pain. This appeared to be a lipoma but, in some instances sarcoma and carcinoma are reported as coexisting with the disease.

Dr. M. H. Bochrock, of Philadelphia, addressed the society on the subject, "Encephalitis". This disease presents an endless number of clinical forms; it is a symptom complex; it is a single disease, due to a single virus; it is epidemic in character, several epidemics having been recorded in history; it may be confused with influenza, as it usually follows influenza. Filtrates of brain material and nasal discharges produce the same conditions in monkeys. The cause is not fully established. There is a catarrh of the mucous membranes with absorption by the lymphatics. All the symptoms grouped around a mid-brain syndrome. The onset is insidious, with slight fever and drowsiness, headache, diplopia. There is a flattening of one side of the face, the eyelids do not move, the face becomes a blank, and the posture statue-like. Children are inclined to be wakeful, while adults are drowsy. Therapeutics are of but little avail; there is no known remedy; scopolamin is useful in relieving the spasms of the muscles.

A committee was appointed to prepare for the annual picnic in August.

ESSEX COUNTY

J. J. Connolly, M.D., Reporter

The Essex County Medical Society held its regular meeting on Friday evening, May 29, at the Academy of Medicine, with Dr. Max Danzic presiding. The minutes of the previous meeting were read and approved.

Doctors R. N. Connolly and E. G. Wherry were appointed to serve as a committee for the State-wide Campaign for the protection of children against diphtheria. Dr. Wherry spoke about the letter which has been sent to each member of the State Society seeking cooperation in the campaign. He also stressed the immunization of pre-school children, as children between the age of 6 months and school age are known to be most susceptible to the disease.

HUDSON COUNTY

Special Committee Report

At a meeting of the Executive Committee of the Hudson County Medical Society, held on June 12, 1928, a resolution was passed whereby the Secretary was ordered to mail to each member of the Hudson County Medical Society a copy of the report of the Committee on Abuse of Medical Charity, which was presented by this committee at the May meeting. The report is as follows:

We (the committee) wish at this time to make the following report:

This committee, which has functioned for the past year, has had many prolonged meetings and, as Chairman, I wish to take this opportunity to publicly thank my fellow members for their never failing interest and energy.

On March 27, 1928, a two-hour conference was

held with Mayor Hague, regarding the best mode of correction of the complaints rendered to this committee:

(1) The Mayor did not see any objection to the committee's suggestion that a card be signed by patients admitted to the hospital, wherein the patient states, "My circumstances are such that I am unable to pay for the care and treatment." New cards for dispensary are now being printed and will be signed by applicants for treatment, who receive medical and surgical aid in the outdoor department, and copy of Jersey City law on the back of card.

The committee feels that this concession is something, and we hope in future conferences to convince the authorities that a further step is necessary. An adequately supervised staff of financial investigators to be installed, checking up as is now done in tuberculosis, insane and tonsil cases.

(2) The Mayor most emphatically stated that the Jersey City Hospital was for Jersey City patients only.

(3) X-ray Abuse: During 1927 and 1928 to date, from 50 to 83 doctors referred from 100 to 150 cases per month to the X-ray Department. Therefore, the physicians themselves are to a large extent to be blamed for the abuse of this department.

(4) Ambulance: The Medical Director has invited the coöperation of this committee in correcting the abuse of ambulance service; while no hard and fast rules can be established on this matter, we feel that all calls from a doctor or police officer, or in the event of a real emergency, from any citizen should be recognized. We feel that in coöperation with the Medical Director, something beneficial to the hospital, city, and public at large can be worked out through publicity of the Physicians' Exchange. Advertising to be done at expense of county society.

(5) Compensation Cases: These are not indigent, but the vast majority are emergencies, and are entered as such in the hospital. Such ambulatory cases are referred to doctor of their own choice after initial dressing. Henceforth, in ambulatory, emergency compensation cases, slight lacerations, burns, Colles' fractures, etc., initial dressings will be charged an adequate fee, so the practice will not compete with the practicing physician. Practice had been to charge a nominal fee in these cases, inadequate for service rendered. This was taken advantage of by insurance carriers and defeated the very object of the compensation law which was established to the end that industry should carry the load of its injured and not cause them to be burdens upon the tax-payers. Personally, I feel that compensation cases should pay adequate ward rates and the attending physician, surgeon or specialist should be compensated for services rendered.

(6) Residents are not permitted to charge, as they are full-time paid city employees. Residents are not allowed to practice privately on the outside, but if certain of the attending staff labor under such an inferiority complex that they can permit themselves to call out into consultation some of the residents, instead of their own colleagues, why lay the blame at the resident's door?

(7) The courtesy of free hospitalization is extended to police and firemen as a recognition of the unusual hazard of their occupation. This courtesy is not to be extended to other employees of the city.

(8) Dr. O'Hanlon says a great deal of the ward crowding is due to the attending staff members keeping non-hospital cases, or the so-called "boarders", at the hospital when they should be discharged. It is a duty the physician owes to himself, the hospital and the tax-payer to discharge from the hospital such cases as he believes are not proper residents thereof and he should be supported in this by the Medical Director, even in the face of outside influence.

(9) Present rules of the hospital prohibit any attending surgeon, physician or specialist from charging a fee to any ward patient. This should be strictly enforced, as it is a well known fact that a number of the staff are actually guilty of this practice. It is the intention of the authorities to eliminate this evil.

(10) The "Private Room" question is the evil of the whole situation. Dr. O'Hanlon, Medical Director, feels that the Jersey City Hospital should not be operated as a private hospital, and feels that there should be no private rooms except for those who are too sick for the open ward, and the moribund, sick nurses, etc., but he feels that if a private pavilion is included in the contemplated 500 bed addition, then it should carry itself with no expense to the city, and the private pavilion should be open to all physicians of Jersey City in good standing.

The question of whether Jersey City should go into the private hospital pavilion operation, competing with those well established hospitals like Christ, Greenville and St. Francis, not to mention the numerous sanatoriums, is a thing we believe should be discussed thoroughly, and those members of Hudson County Medical Society who are residents and tax-payers of Jersey City, should give this problem great consideration.

The proposed County Maternity Hospital is in the same category. We were given to understand by the authorities that both projects were about to be launched.

(11) The problems referred to this committee and the time and energy expended thereon would be unnecessary if the staff of the Jersey City Hospital functioned as a staff. Many complaints made to this committee need never have arisen if the staff members were in coöperation and loyal, and had the ideals of their profession been adhered to.

The attending staff members should be made to realize their responsibilities to the hospital, the public, and to their colleagues in the medical profession, and be permitted to perform their duties consistently in their respective fields, so that they could earn the proper respect of the executive authorities and receive the recognition that is due them in the same way and manner as attending staffs in other hospitals. This would eventually lead to elimination of abuses from which the hospital now suffers and which prevents it from rendering proper service to the community.

We deplore the supine attitude of the attending staff in permitting themselves to be deprived of the services of proper assistants. The hospital is making no provision for the training of future attendants. Instead, the positions of these assistants are filled by residents who receive a valuable training and good salary and maintenance, all at the expense of the city, but with no ultimate return to the city.

(12) A great many problems are still to be ironed out with Mayor Hague, on policy, and with the Medical Director, Dr. O'Hanlon, on detail and

application. We feel that our work is not yet complete, and we trust that we will have your assistance to the end that the people of Jersey City may have the best kind of a hospital, giving the greatest amount of real hospital care to the greatest number in real need of it, for those unable to pay.

Our Medical Society policy should be reiterated again and again: "Everything essential for those economically, medically and socially insolvent, but nothing at the public expense for those competent to purchase the essentials of life and health from established sources."

Respectfully submitted,

W. J. Sweeney, M.D., Chairman.

UNION COUNTY

Russell A. Shirrefs, M.D., Reporter

Tropical heat and torrential rains were factors limiting the attendance to 30 when the regular meeting of the Union County Medical Society was held at the Elizabeth General Hospital on the evening of July 11. Dr. Frederick Sell, of Rahway, presided.

Dr. S. L. Haseltine presented a man, age 30, who 9 months ago began to suffer from epileptic convulsions and marked diminution of vision. A diagnosis of brain tumor in the right temporal region was followed by a decompression operation which gave considerable relief, in spite of resulting cerebral hernia.

A nominating committee was elected, consisting Drs. Z. L. Griesemer, C. H. Schlichter and John Annells. Seven proposals for membership were received, to be voted on at the next meeting, and the following candidates were formally enrolled: Drs. Raphael Cantine and James G. Boyes, of Plainfield; Nicholas A. Falvello, of Morristown. Dr. James S. Green gave an interesting report of the State Medical Society meeting, and announced that the next annual meeting would be held in Haddonbury Park.

On behalf of the society, the Secretary was instructed to send a letter of congratulation and good wishes to Dr. Victor Mravlag, of Elizabeth, one of our most respected and highly esteemed members, who on July 18 will celebrate his seventy-seventh birthday.

On the completion of other routine business, the meeting adjourned.

The Endorsement of Commercial Products by Physicians

By Lloyd Paul Stryker, Esq.

Counsel, Medical Society of the State of New York

In this present era of advertising and publicity, it has become a widely followed practice for the makers of all kinds of goods to advertise their wares by printing the pictures of well-known men or women together with their endorsements of the product. Thus, we are accustomed to see portrayals of dramatic critics, actors and actresses smoking some particular brand of cigarette and certifying that there is nothing in it. The endorsers, we understand, are not infrequently remunerated.

The propriety of this course on the part of those who furnish their endorsements, where such endorsers are members of the laity, is a matter falling within their liberty of choice, and is properly governed by their own sense of the fitness of things. When, however, non-therapeutic agents, such as, for example, cigarets, are advertised as having the recommendation of the medical profession, the public is thereby led to believe that some real scientific inquiry has been instituted, and that the endorsement is the result of painstaking and accurate inquiry as to the merits of the product.

Despite the frequent attacks upon the medical profession, we believe that the people of this country, take them as a whole, have a regard and wholesome faith in their physicians. All that tends to the building up and strengthening of this faith redounds to the benefit of the medical profession and of its individual members, and that which in any wise tends to shake this faith and confidence works a detriment not only to the profession as a whole, but to each individual practitioner. All that tends to strengthen the faith of the people in the belief that medical opinions are founded upon a sound scientific basis, should be fostered by the profession.

Not long ago, the writer's attention was called by various leading practitioners of this city to certain advertisements appearing in the lay press which, if the foregoing principles are sound, would not seem to redound to the ultimate benefit of the profession. The advertisements particularly referred to are those widely heralding a certain brand of cigaret. One advertisement portrayed a young man with a cigaret in his hand standing evidently in a doctor's consultation room, for behind the gray-haired and respectable-looking personage obviously depicted as a physician, there stands a young woman (an exceedingly attractive one) in a nurse's uniform. After display headlines giving the name of the cigaret in question, there appears this: "Then note the verdict of 11,105 doctors." The question was asked as to why certain singers, actors and broadcasters had found this particular brand of cigarets "of no possible injury to their voices," and then the advertisement proceeds: "For the answer we turned to medical men and asked them this question: 'Do you think from your experience with _____ cigarets that they are less irritating to sensitive or tender throats than any other cigarets whatever the reason?' 11,105 doctors answered this question 'Yes.'" There is a footnote to the statement purporting to bear the certification of a firm of certified public accountants "that we have examined 11,105 signed cards confirming the above statements."

We have no knowledge as to whether or not the facts stated in the advertisement are correct, but in the absence of evidence to the contrary, we would be forced to the conclusion that the representations made are accurate; in other words, that the number of physicians certified to, had in fact endorsed this particular brand of cigarets as "less irritating to sensitive or tender throats than any other cigarets." We are confident that not a single one of the physicians so certifying had even the faintest idea that such a course might in any wise militate against the best interests of the medical profession.

What probably happened, we presume, is that the company sent to the doctors in question a

carton or more of the cigarets, and then later wrote them asking their opinion of them, to which in all good faith the doctors, no doubt, responded as is represented. We have no knowledge that this was the course pursued, but from our general knowledge as to the way in which advertising campaigns of this kind are conducted, think this is probably a plausible explanation.

By this advertisement, however, the general public is given the impression that there has been a real scientific inquiry as to the therapeutic effect of the cigarets in question, and that a real scientific investigation has been made, as a result of which the conclusion has been scientifically arrived at that the cigarets in question were "less irritating to sensitive or tender throats than any other cigarets." It is highly improbable, to say the least, that any such scientific investigation such as doctors make in order to determine the value, let us say, of insulin or other therapeutic agents, had been made. The thinking members of the public must realize this, and those of them inclined towards a dislike or suspicion of the profession might unfortunately be led to the conclusion that professional judgment was in some instances tainted with that commercialism which would destroy its scientific value. If this is so, such conclusions would not aid in building up that confidence and respect for medical opinion to which your great profession and its individual members so richly are entitled.

In looking through the principles of professional conduct of the Medical Society of the State of New York, we find no canon which the endorsements referred to would definitely violate. The first section of those principles declares that "Everyone on entering the medical profession and thereby becoming entitled to full professional fellowship, incurs an obligation to advance the science and art of medicine, to guard and uphold its high standard of honor, to conform to the principles of professional conduct and to comport himself as a gentleman." No one for one moment will contend that any physician making a certification, such as is here mentioned, has failed "to comport himself as a gentleman." On the other hand, the question may perhaps be legitimately asked whether such a course tends "to advance the science and art of medicine and to guard and uphold its high standard of honor."

The suggestions which we have here indicated, we feel might well be a proper subject-matter of discussion among physicians in general in order that definite views upon this subject may be formulated. It is possible that the suggestions here made may not be generally acceptable. If, however, the views herein expressed seem generally satisfactory to the medical profession, to the writer at least it would seem wise if at the next meeting of the House of Delegates an additional article were added to the principles of professional conduct whereby the endorsements by physicians of purely commercial and non-therapeutic agents would be condemned. Such an article would tend to clarify the situation, and would present this question in a definite way to the entire profession. Those, then, who had not considered this matter from the point of view herein indicated, would be furnished in the shape of a definite article, a standard to which all of the profession would promptly and cheerfully conform.—Medical Progress.

A PRAYER

By John Drinkwater

Lord, not for light in darkness do we pray,
Not that the veil be lifted from our eyes,
Nor that the slow ascension of our day,
Be otherwise.

Not for a clearer vision of the things
Whereof the fashioning shall make as great,
Nor for remission of the peril and stings
Of time and fate.

Not for a fuller knowledge of the end
Whereto we travel, bruised yet unafraid,
Nor that the little healing that we lend
Shall be repaid.

Not these, O Lord, we would not break the bar
Thy wisdom sets about us: we shall climb
Unfettered to the secrets of the stars
In thy good time.

We do not crave the higher perception swift
When to refrain were well and when fulfill,
Nor yet the understanding strong to sift
The good from ill.

Not these, O Lord. For these Thou hast
revealed
We know the golden season when to reap
The heavy-fruited treasure of the field,
The hour to sleep.

Not these. We know the hemlock from the
rose,
The pure from stained, the noble from the
base,
The tranquil holy light of truth that glows
On pity's face.

We know the paths wherein our feet should
press,
Across our hearts are written Thy decrees.
Yet now, O Lord, be merciful to bless
With more than these.

Grant us the will to fashion as we feel,
Grant us the strength to labor as we know.
Grant us the purpose, ribbed and edged with
steel
To strike the blow.

Knowledge we ask not—knowledge thou hast
lent:
But Lord, the will—there lies our bitter need.
Give us to build above the intent,
The Deed: The Deed.

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WHAT IS THE VALUE OF THE HEALTH OFFICER?

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Pitman, N. J.

The value of the health officer to the layman will be considered first. How has the layman benefited by the work of the health officer? He has been relieved of terrors well-nigh forgotten, and is enjoying such riches of health as he has never experienced before. Seventy years ago, no city was free from the fear of yellow fever, smallpox, cholera or plague. Typhoid was reaping a harvest. Virulent typhoid fever was sweeping over the country in waves. Diphtheria was striking terror in the hearts of parents and despair in the hearts of physicians. Malaria and hook-worm were overrushing the South.

Today, yellow fever is almost gone from the face of the earth. Cholera has not been heard of in this country for a generation. Plague is held in control. Typhoid fever is called a vanishing disease. Smallpox is still with us because of apathy to the health officer's work. Malaria is still being held in check, hook-worm eradicated. Scarlet fever prevails, but with 1/10 its former fatality; possibly because the health officer has isolated the virulent strain of infection to the point of extinction. Diphtheria is with us at 1/5 the death rate of pre-antitoxin days, and is now approaching complete control by

toxin-antitoxin. Influenza alone has escaped being held within comfortable bounds.

The health officer has changed man's environment. A health officer made a health resort of Panama where white man could not survive before his coming. All the United States shows the results of the health officer's work. The general death rate has been cut in half.

Let us, for a few moments, follow the activities of an average family to see some of the ways in which the health officer's activities have affected our daily life. Mr. and Mrs. Jones do not recognize the part the health officer has had in many of the things to which they are accustomed nor that he is quite directly responsible for some of their views or thoughts upon every day matters.

The family awakes in the morning after a night's rest upon mattresses on which there are labels certifying that only new, clean materials entered into their manufacture. They have slept with their windows open, because the health officer taught the value of good air, and that screens kept out the winged bearers of miasmas formerly believed inseparable from night air.

After hopping out of bed and closing the windows, a visit is made to the bath room, where the faucet delivers pure water, possibly filtered and sterilized, and regularly analyzed by the health officer. The teeth are brushed, because the health officer taught the value of mouth hygiene. The bath room waste is carried to a sewage disposal plant or tightly covered cesspool, and the odorous, fly-contami-

nating open-back privy is gone from the yard, along with the cold weather constipation.

In dressing, light cotton underwear is put on because our houses are better heated, and for out-of-doors, the outer clothing is chosen according to the daily temperature. The old woolen "heavies", which kept the skin moist and sluggish in its reactions to changes in temperature, are rare in these days.

On the front step is the Pasteurized milk in mechanically filled and capped, sterilized bottles, and the newspaper with its daily special article on some phase of health. The milk is promptly placed in a refrigerator, preferably an electric one because its temperature is kept below 50° so that all bacterial growth is checked.

For breakfast, the family has some fruit with its vitamins and roughage, toast from a wrapped loaf, and cereal from a tightly sealed container. People are not eating as much as formerly because the health officer taught them its disadvantages, while the consumption of fruit and vegetables has increased, because he advocates them as health and growth promoters. The meals are appetizingly served and the conversation is pleasant, because the health officer has taught their value in promoting appetite and digestion.

The man goes off to work in an office with furniture very plain in design, because more readily kept clean. His desk has a dark, dull top and a well shaded lamp of the proper height to prevent eye-strain. The office has enameled walls, automatic heat control and some provision for ventilation without draught. He lunches where regular inspections are made of the kitchen, the food handlers are examined for communicable diseases and the dishes and silver are sterilized. Before going to lunch, he washes his hands and dries them upon a paper towel. If he is a commuter, he may, on the train, drink from a paper cup, water taken from an approved source and cooled by ice which is not in contact with the water.

The child goes to school with a note to explain that its absence was not due to any illness which might be communicated. The

school nurse asks a few questions, which the innocent child can be expected to answer truthfully, to check up on the contents of the note. It takes its place on a seat of such height and slope before a desk of such height and at such distance, that proper posture is the comfortable position. The class room windows are on the child's left with no black boards between the windows. There is the daily inspection by a pupil to detect unclean teeth and dirty hands and fingernails. The medical inspector examines the child for any signs or defects and at recess milk and crackers are served. At noon the school cafeteria provides a hot lunch with wholesome articles at less than cost and the less wholesome at a good margin of profit.

The housewife cleans up the breakfast scraps and places them in a tightly covered garbage pail for collections by the municipal collector of garbage. The old, fly-breeding pile of garbage in the weed-grown corner of the lot is no more, which with the screened door and windows have made a memory of the fancifully cut newspaper fly roost which hung over the dining table and the "shoo-fly" which had to be constantly used to avoid finding flies in most unexpected places in the food.

In her marketing, she chooses those things which she knows will be good for her family. She patronizes the shops which are clean, and their produce fresh and well kept. She wants to see the official inspector's stamp on the meat she buys and likes her provisions in factory sealed packages.

In the afternoon, she takes the baby to the clinic where it is weighed, measured and a record made which will quickly show any departure from normal growth. At the clinic she is taught how to dress and care for the baby with such detail as the physician cannot usually see fit to take the time to give, if he happens to know them. Then she attends a child study group at the school where mothers of the neighborhood learn what they must do to be good mothers and give their children every opportunity to develop into normal, healthy adults.

So all day and all night the average family is in some way protected or in some way being led to seek improvement by the health officer.

Now let us consider the value of the health officer to the physician. The scientific practice of medicine is the foundation of all public health work. The health officer seeks authoritative information and regrets the harm done by the half-baked stuff. Health officials are striving for better medical practice and to discredit quacks and nostrums. They are educating people in what constitutes good medical practice. They are disseminating knowledge of the value of specific remedies. They are creating a new field of medical practice—preventive medicine—while in so doing, they are not robbing the profession of its curative field, because the human machine cannot be kept functioning forever, and it will continue to need curative treatment, and it will need it during a longer life.

The health officer is educating the people in matters of preventive medicine. His great aim is to get people into the care of qualified physicians, and his ambition is to inspire the physicians to be prepared and anxious to supply that character of service which the health officer wants the people to receive.

Health departments made and distributed diphtheria antitoxin. They preached its value to the medical profession and the laity, and find it necessary to still do so, 33 years after its discovery. They preach the value of vaccination, now 130 years old. Forty years ago, in order to vaccinate at all, physicians had to vaccinate quite regularly to keep a fresh scab available. It was then their custom to vaccinate their babies when about one month old. This practice kept scabs available and smallpox well under control. Then vaccine began to be kept in the corner drug store. Today, if the school and health officials were not active, little vaccination would be done, and even in the presence of smallpox sufficient vaccination to control the disease is difficult to secure. Long experience has shown that if left to their own devices, few of the people will avail themselves of the benefits of vaccination against smallpox, or the immunizing

treatments against diphtheria, typhoid, etc. The health officer has to use every available means to secure the use of immunizing agents, and nothing short of eradication of the preventable diseases will cause him to discontinue to do so.

Medical science has taught the health officer what things in man's environment are harmful and what are good. In sanitary work, the health officer can accomplish his aims largely because of the police power given to him, but even in this field, to do so without opposition, he must educate the people to see the need for it. In those health promotive measures of an individual nature or application, the health officer has no power to compel, and must rely upon education to arouse an appreciation of the need and the meeting of that need.

The modern health officer must keep ahead of the people he serves and also ahead of the medical profession in his particular field. The health officer is preaching the need of prenatal guidance to reduce infant and maternal mortality, and to increase the proportion of healthy babies. Some practitioners do not take obstetric cases, but the general practitioner usually sees the pregnant woman before the obstetrician is engaged. The general practitioner should be ready to give prenatal guidance until such time as the obstetrician takes charge of the case. Quite soon after birth, the baby and mother get back to the general practitioner, and that is the critical time when the character of the guidance in child training is going to largely determine the mental as well as the physical development of the child.

Physicians have been trained to recognize and deal with sickness, but to a great extent are unacquainted with health. The health officer wants the medical practitioner to cultivate an understanding of health and particularly to recognize and appreciate the difference between a mere absence of concrete abnormality and exuberant health. To gain this understanding of health, there is nothing like clinical experience. It would be well if physicians would examine every healthy person that opportunity offered.

An abundance of clinical material is available to nearly every physician, and it is not necessary to travel to some distant hospital for it. In this county, we have a number of baby-keep-well stations, where babies and pre-school children may be found each week. These stations are now presided over by a nurse, trained in child hygiene, but physicians would be enthusiastically welcomed. Any physician who would give an hour a week to examining the children brought to these clinics, would find in a short time that he was gaining an understanding of children in varying degrees of health. Quite a considerable portion of the general practitioner's work is with children. To be connected with a large hospital clinic is valuable and carries with it a certain satisfaction, but it is time-consuming to the out of town physician, while a reputation of revenue producing value can be gained in a small local clinic.

The "Summer Round-Ups" and school medical inspections afford opportunities to examine quite large groups of children in all degrees of health. If the physician examining these children merely examines them to get the information necessary for the required records, the work is a chore, but each group will provide individuals whom he may well study as examples of healthy childhood. He should find it profitable as well as of absorbing interest to try to find out why two boys who weigh and measure the same are so totally different, yet both apparently classifiable as healthy.

Insurance and health examinations probably give physicians their best chance to examine supposedly healthy adults. Any physician, with the official list of things to be noted, can go through the form of an examination and if he finds nothing wrong, say they are sound, but the more a physician comes in contact with the physically sound, the more he will recognize that there is a difference in what we term health. One may be quite well and another, equally sound, will obviously derive double the amount of enjoyment from life. What makes the difference? That is what the physician, dealing with healthy persons, must develop the ability to recognize. Some-

times he will find the answer in the mental habits of the patient, which none of his diagnostic instruments would detect.

The health officer wants each of the members of the medical profession to become an expert on health, and also to employ all the accepted specific disease prophylactics. The health officer wants the physician to vaccinate every child during its first year and to give toxin-antitoxin to each during its second 6 months. These two are our outstanding immunizing procedures, and physicians should endeavor to have them universally employed.

Health officers cannot quite understand how it is, with anything so common as smallpox vaccination, that physicians do not more generally know what are accepted to be the best practices in insertion of the vaccine and care for the vaccination to prevent undesirable results. Neither does the health officer quite understand why so many physicians have not given toxin-antitoxin extensively while they do give cold vaccines and hay fever treatments, which are more trouble to give because more injections are required, often give greater reactions, and have to be repeated yearly. When the health officer consults the records of mortality from coryza, hay fever and diphtheria, he becomes more confused. He believes that the medical profession has been simply supplying what it was asked for. He feels that the medical profession should lead rather than be led, but he goes right ahead trying to create a demand for toxin-antitoxin. To his regret, he has been unable to make the demand great enough to draw the patient and physician together, so, to reduce diphtheria, he has been compelled to fall back upon public offers of free administration of toxin-antitoxin, and unless things change, it will be free toxin-antitoxin which causes diphtheria to become a memory.

Health officers, generally, are not faddists, so physicians and others can usually take it for granted that when a health officer recommends a certain procedure he has good grounds for it. That is only introductory to saying that the general use of scarlet fever prophylactics is not recommended. The people seem well informed that there is a scarlet

fever preventive, are inquiring about it and asking their physicians for it. For various reasons, health officers generally are recommending only the antitoxin for treatment of fairly severe cases of scarlet fever.

The health officer has changed the character of medical practice. He has, by eradicating the great pestilences, relieved the medical profession of its exhausting, yet often futile, efforts to cope with them. He has, by sanitation and education, greatly decreased the incidence of typhoid, dysentery and the summer digestive disorders of children, the treatment of which seldom gave much satisfaction to the practitioner. The health officer is now endeavoring to make a large part of the practice of medicine preventive in nature, and believes that by doing so, he is urging upon the profession a kind of practice which the physician will find most agreeable, and satisfying to his highest instincts to serve the welfare of mankind.

TRAUMATIC LESIONS OF THE HEAD AND THEIR RELATION TO THE OPHTHALMOLOGIST

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(Presented at the New Jersey State Medical Society Convention, Atlantic City, June, 1928.)

This paper is intended to explain the policies and principles which have gradually been evolved in the Department of Cranial Surgery at the Newark Eye and Ear Infirmary, and the Newark City Hospital, for diagnosis and treatment of head injuries.

ESTABLISHMENT OF HEAD SERVICE

A Department of Cranial Surgery should be established in every general hospital if there is going to be adequate preparation for treatment and diagnosis of the very complicated problems of head injuries and suppurative diseases of the brain. The department

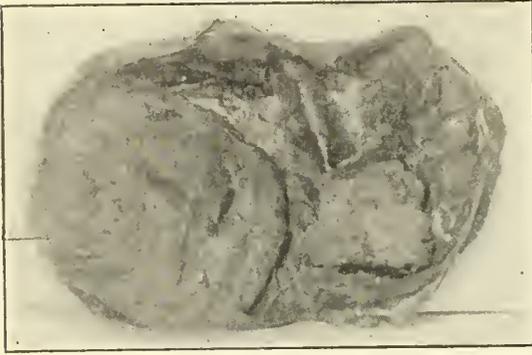
should have at its service a general operating room. There should be a chief and at least one assistant; both of these should be expert ophthalmologists, for ophthalmologic examination plays an important part in the diagnosis of all doubtful cases. Attached to the department should also be a trained technician—trained to take visual fields, and to conduct neuro-aural examinations, rotations, calorics, etc.

CEREBRAL TRAUMA

In using the term, "head injuries", objection should be made to the importance usually attached to the presence of a fracture of the skull. A fracture of the bones of the cranium never kills of itself; on the contrary, it very often saves the patient's life. The important factor is the degree of cerebral trauma, whether associated or not with skull fracture. If we have an injury to the vessels inside the dura, and the blood or edema fluid can not get out, then with no injury to bone we may have death from pressure. The points to consider are, whether there has been damage: (1) to the brain substance itself—brain laceration; (2) hemorrhage, punctate or massive, into its substance; (3) hemorrhage or exudate external to the brain, but causing pressure on it. The first and second conditions are irreparable by the surgeon; the third calls for operative intervention.

Surgically cerebral trauma cases may be divided into 6 clinical groups, of which the following histories are typical.

(1) *Middle meningeal cases, extradural hemorrhage.* A boy gets into an altercation and receives a blow on the jaw; he falls backward, striking his head. He immediately arises and goes home, but does not tell his parents anything about the quarrel. That night his mother is awakened by his labored breathing. The boy is unconscious. A physician and the ambulance are summoned. Suddenly the boy stops breathing. Autopsy shows that he has a large extradural hemorrhage from the middle meningeal artery. In *intracranial hemorrhage* the bleeding, instead of occurring external to the dura, may occur under it, i.e. between the dura and the brain.



Large Subdural Hemorrhage.

(2) *Hemorrhage into subdural space.* A boy, with his companion, is thrown to the floor and strikes his head; he rises immediately and says his head hurts, but goes about his work. That night he has a headache and vomits. For 6 weeks he continues to have headache and consults doctor after doctor. It is suggested that the injury may have something to do with his present condition. An x-ray is taken but nothing abnormal is found. He goes to an ophthalmologist and receives a pair of glasses. One day he develops a slight convergent strabismus. Another x-ray is taken, but it is again negative for fracture. That night his pulse goes down to 50. He is now gone over carefully, neurologically, but all that is discovered is a tendency to facial weakness on one side and a very mild degree of papilledema. A large osteoplastic flap is turned down and the dura opened. Directly under the dura there is a blackish, greenish mass. This is washed away and the dura is closed. *Small subdural hemorrhage with a fractured skull*, while the patient is walking around for a period of weeks, is far from uncommon.

(3) *Case of successive extradural, subdural and intracerebral hemorrhages from repeated slight traumas.* A boy, while playing with his mate, was bumped on the right temple. That afternoon he told his mother he had a severe headache, but did not mention the blow. He continued to have headache. (Later at the postmortem we saw that at the time he bumped his head the first hemorrhage had occurred.) Three weeks later he began to

vomit and was seen by a doctor. He had no fever, pulse was not slow, and the doctor thought the vomiting might be hysterical, because there was nothing in his abdomen to account for it. The boy was then examined by a third surgeon. This doctor pressed very severely over the region of the pain in the side of his head, and the child complained to his mother that the last examination hurt his head severely. That night he vomited again. As the result of pressure on his skull he had another intracranial hemorrhage. At last he developed double vision and was sent to the Eye and Ear Infirmary, where he was found to have not only double vision, but also a mild papilledema. As at that time we did not know very much about the danger of lumbar punctures, and were doing them rather routinely in head injuries, he was punctured for diagnostic purposes and immediately afterward went into coma. We opened the skull and evacuated a large extradural clot over his meningeal artery. He died that night. At autopsy we found 3 distinct hemorrhages; 1 extradural and 2 intracerebral. The different ages could be seen in the subdural clots. First he had a hemorrhage when he bumped his head; then a second hemorrhage when the doctor pressed firmly over the area of a small fracture; and the third occurred when we upset the cerebral mechanism by doing a lumbar puncture, and so we have a *combination of extradural and subdural hemorrhage*.

(4) *Subdural hemorrhage with a secondary edema.* A policeman was struck with a club. That night he said very little about the occurrence, but 3 days later he had a terrible headache, and gradually became maniacal. Why did he become maniacal 3 days after the injury? Because he had a secondary edema, the result of a small subdural intracerebral hemorrhage. *Secondary edema is normally a protective reaction*, but it can easily do great damage.

How can we recognize these 4 different types of cases? First, extradural hemorrhage is always recognizable by there having been a *free interval*. That should be the keystone of all our diagnosis. If a man is struck and the injury is severe enough to cause intracerebral

bral bleeding, he should become unconscious *immediately*. However, if he does not become unconscious until later, it is generally because there has been a gradual bleeding from the middle meningeal artery; for if the bleeding had occurred inside his brain he would have dropped and continued to remain unconscious. Therefore, inquiries should always be made about the *free interval*. If the patient is unconscious, always ask, "Did he speak after he was hit?" If he has been unconscious from the moment of the injury, he probably has not an extradural hemorrhage.

We sometimes meet with cases in which the history of a free interval is confused. A man was struck by a trolley car and brought into the hospital. The officer who brought him in said that after he was struck he was delirious, but before they got him to the hospital he became unconscious. During the first few hours his blood pressure gradually rose to nearly 200 mm. Hg, then gradually dropped again to 140, but he remained deeply unconscious. When I examined him, I said it was impossible that he could have had a blood pressure the previous night of 200 and now, at the time of examination on the following day, of 140. I asked regarding a free interval, but they did not know. During the examination I bent his head forward to see if he had a stiff neck. From the time I moved his head his blood pressure started to rise again; within an hour it went to 190 and he stopped breathing. Principle: *A free interval means a hemorrhage from the middle meningeal artery. Be careful in traumatizing a patient with suspected extradural hemorrhage. It may start the bleeding again.*

Importance of considering the region of the injury. The surgeon should always consider the region of the injury. An injury in the temporal region without bony displacement is apt to be associated with a small crack that may tear the middle meningeal, and so an extradural hemorrhage results. An injury to the frontal region with displacement of bone may cause no symptoms. An extensive fracture of the vault may be symptomless.

How can subdural hemorrhages be diagnosed? They produce headache, generally

without a fractured skull; a headache that continues, although at intervals it is very much worse than at others; a headache that, after it continues for a certain time, is usually associated with a mild papilledema, and sometimes with an external ocular paralysis. A headache that persists after an injury that was not severe enough to have cracked the bone itself, should awaken suspicion of subdural hemorrhage, especially if associated with other symptoms of increased intracranial pressure. In this latter I include an inability to produce nystagmus from the cold caloric when applied in the upright position.

How can a subdural hemorrhage with a secondary edema, such as the case of the policeman, be diagnosed? The secondary edema caused the man to become more or less maniacal. It is almost invariably taken for delirium tremens, but in reality is the result of a rushing into the brain of an excessive protective reaction. Many of the cases of delirium tremens which began with an injury are found to have small subdural hemorrhages.

TREATMENT

What can be done for these 4 types of cases? Find the artery in the middle meninges, and either tie it or block it. This is a somewhat difficult procedure because of its depth. The operation should be based on the principle of opening the bone at the pterion. A line is drawn from the junction of the frontal and malar bones to the pre-auricular protuberance; about in the middle of this line is the pterion, directly under which is the point where the middle meningeal leaves the groove in the bone after it runs over the floor of the middle fossa and divides. It is usually near the pterion that the bleeding occurs, because the artery is in the bone here. On account of the depth, a good-sized skin flap should be made and the muscles split. A drill opening is then made and the bone rongeuired forward and upward. Blood will well up, but it can be controlled by the finger or a piece of cotton pushed down between the bone and the dura while the bone is being rongeuired. When the bleeding point is exposed, a suture should be passed around it.

The important thing is to get an opening in the bone, for it is the pumping of the blood between the dura and the bone which is the cause of compression. When this compression causes a rise in the systolic blood pressure, it shows that the medullary centers are embarrassed and the patient's life endangered.

The opening should be made by an electric motor and drill, such as is used by constructors to perforate iron. This can be purchased for less than \$50. Fancy drills get out of order too easily. The commercial drill can be sterilized, and should take the place of a hammer and chisel. Drill the bone away until a good-sized opening is obtained, and then rongeur the hole larger.

Why should the perforation be done with a drill? In intracranial hemorrhage every time the bone is hit, the man's cerebral mechanism is further upset and the hemorrhage may be increased. We cannot hammer a skull beneath which is cerebral tissue which has been traumatized, as we perform a mastoid, without increasing the bleeding.



Large Subdural Hemorrhage; Unrecognizable for Months.

Treatment of subdural hemorrhage. It is imperative to make a large opening through the dura so that the clot may be washed out. The clot is apt to be very thick, greenish, and adherent to the dura. If it is lifted out with a pair of forceps it bleeds, and it may be very difficult to stop the bleeding. There is a mechanism inside the dura that has a very definite and distinct function—the arachnoid cells. This mechanism makes new blood-vessels when irritated, and in the removal of

the clot by force the new blood-vessels bleed. If water is washed over the clot, presently the blackish mass will begin to flow away by its own weight. Its removal will expose a piaarachnoid that looks as if it were covered with granulation, but the piaarachnoid is intact.

What is to be done with the large space left between the dura and brain in which the clot lay, for the brain does not immediately fill the space? I think it advisable generally to sacrifice the bone flap. If the pressure of the clot has only continued for a few weeks, the brain may begin to expand a little, but usually does not. On the last patient, we took a tuck in the dura and sewed it over the compressed brain. The man recovered, but as a rule I do not think that it is well to leave this space, for, although it may be filled with water, the water leaks out. A large space will be left immediately after the operation and this space may fill with blood again, so I think the bone flap should be sacrificed, the skin brought over the closed dura, and a drain put on each side. The next day it is surprising to see how the brain has swollen. *Principle: Do not handle a subdural clot.* If you try to lift it out you will get into difficulties that you may be unable to control. Wash the clot out, even though it takes some time.

Treatment of a subdural hemorrhage with a secondary edema. The object is to get rid of the edema. Some authors contend that any edema a lumbar puncture will not control can not be relieved by operation. Of course if lumbar punctures are performed in all cases there will be accidents. A lumbar puncture does not lessen the pressure, but if you are trying to control edema by lumbar puncture, do not be afraid to puncture frequently; do a lumbar puncture at 10 a. m. and then do another in the afternoon. A routine practice with us when secondary edema is threatened is to give magnesium sulphate by rectum, as the patient is very apt to vomit if it is given by the mouth. It is probably the best thing we have outside of a subtemporal decompression.

The above types of cases of subdural hemorrhage, and subdural hemorrhage with edema,

are rather unusual. How, then, shall we treat the usual case of cerebral trauma?

(5) *Compound fracture of the skull.*
Principle: Convert a compound into a simple fracture. A man brought to the hospital had been unconscious for a few minutes and was a little groggy. He had a wound of the scalp, generally over the vault of the skull, but was not very sick. Now, whether he had a fractured skull or not was important, for he had a wound and into the wound dirt and infection had been carried. If the wound should be sutured it could suppurate, and if under that wound there was a fracture and a tear that went through the dura, then in a few days he would have an infected area of the skin and bone which would extend through his dura; and although at the time of admission he looked and felt well, later he was apt to die of meningitis.

The indication is to prevent infection in a wound which is manifestly contaminated, and to convert a compound into a simple fracture by making an infected wound sterile. This effort must be made within 8 hours after the patient has received the injury. Sterilization can be accomplished by "débridement" of the wound, as learned during the war. Excise the scalp for at least half an inch beyond the edge of the wound, pull the parts away with a retractor, look down into the wound, and see if there is any loose bone. Take out every fragment of bone that is loose, because it is the loose pieces of bone in which the micro-organisms remain. Rongeur or drill the bone away freely, and then unite the skin and soft tissues. All this must be done within 8 hours. After 8 hours it is impossible to convert an infected wound into a clean one. If there are fragments of bone left in the wound, the effort is apt to fail and the wound will become infected.

So, the most important thing is to excise the skin freely and early, and remove all the loose fragments. I do not try to close the dura, but cover the dural opening by skin. In the presence of infection in the skin the dura will close, but in the presence of infection that has spread to a piece of dead bone, meningitis may develop. I do not hesitate

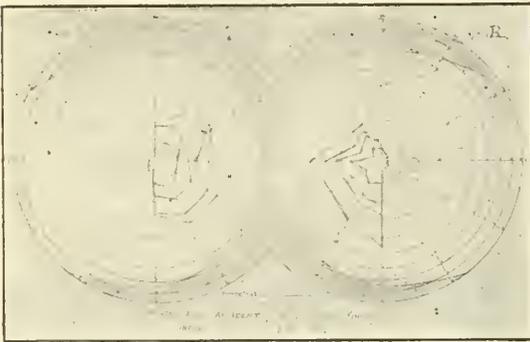
to close the skin over a torn dura, providing all bone and dead and infected skin have been removed.

Principle: Do not operate in cases of severe surgical shock from cerebral trauma. A man has a depressed fracture, and is in coma. Shall he be operated upon? It depends somewhat on whether he has reserve energy to withstand the operation. If a man has been hit by a trolley car or an automobile, and if he is further traumatized by a surgical operation, the added shock may kill him. Any patient who is in shock, with a diastolic pressure that is below 40, and a rapid pulse, will not be saved by an operation on his skull. A degree of shock that causes a rapid pulse and a diastolic pressure below 40 will not permit a long intracranial operation such as is necessary for extensive débridement and elevation of a depressed fracture. Do not hesitate to give such a patient stimulants. Of course, if the patient is suffering from loss of blood transfusion will tide him over so that he may stand an operation, but the majority of patients who are unconscious and die without operation within the first few hours, do so because they never recover sufficiently from the shock of the trauma to cerebral tissue.

Cerebral compression—Rising systolic and falling diastolic pressure—Increasing pulse. The patient is unconscious and is able to stand an operation. There is no evident depression. Shall he be operated upon or not? The thing to decide is whether the unconsciousness is due to cerebral compression, and the degree of the compression. If the patient is unconscious, has a rising systolic blood pressure and a falling diastolic, that is, a progressively increasing pulse pressure, the end is not very far off unless you relieve the condition by a decompression. With it always goes a congestion of the veins and a papilledema. *Principle: Increasing unconsciousness with a progressively falling diastolic pressure, with rising systolic pressure and progressively increased pulse, is enough to warrant immediate interference.*

The area through which a compound fracture goes is of great importance. Basal fractures. Man was unconscious, bleeding from

his ear, vomiting, and a large amount of blood was passing from his nose into his throat. He had nystagmus and one or two black eyes. Manifestly he had a fracture through the base. What was to be done for him? There is no way of excising a fracture that goes across the floor. If the fracture went through his petrous pyramid (a longitudinal fracture or a crossing fracture), it could not be excised; so, if he had a fracture through his base, as far as prevention of secondary infection by excision was concerned, we could do nothing at the time of the accident. Later, if nature failed to wall off the cerebrospinal system, it would be a different matter.



Bitemporal Hemianopsia Following a Fracture Through Base of Skull. Ultimately Case Developed Diabetes Insipidus.

Compound fracture through the petrous. The patient had a fracture through his ear. He was no longer unconscious, but was totally deaf in the ear that bled and which still had cerebrospinal fluid coming from it. He still had a severe nystagmus and vomiting, and now, 2 or 3 days after the injury, pus began to discharge from the ear. Manifestly we were in the presence of a suppurating wound and a compound fracture of the base. The vast majority of cases in this condition do well. Only 8% of cases of fractures through the temporal bone with purulent ears die; 90% of them recover if properly treated.

Dr. Hans Brunner showed us how to recognize the cases that must be operated upon. Watch the temperature; if it begins to rise, if the patient begins to have the least stiff neck, operate on him. Open the squama,

mastoid, and petrous widely, and follow the line of fracture no matter where it goes. A great quantity of fluid may escape, but it is surprising how well such cases do if they are radically explored. In the last case of this type that we lost at the City Hospital, we simply watched the patient die. The post-mortem showed that the pus was limited almost entirely to the posterior fossa. *Principle: A fracture through the base that begins after a few days to have a temperature, with bleeding ear, discharge of pus and slight stiff neck, should be operated upon.*

Fracture through the frontal sinus and nasal cavities. It was demonstrated during the war that if a man has an injury to his frontal sinus he is very apt to die. A large proportion of such cases develop meningitis. Statistics prove that 25% of all injuries of the frontal sinus die, while only 8% of injuries through the petrous are fatal. This is a very remarkable fact. *Principle: All depressed fractures of the frontal sinus should be operated upon* because they may have a tear in the dura behind. What is the history of their demise? They do not die right away; they may expire 6 weeks after the accident, or they may live a year, but eventually most of these patients die.

Case 1. A man was struck on the forehead by an iron hoop. The bone was driven into the sinus, the inner wall of the frontal sinus fractured, and the dura torn. The depressed bone was removed and the wound closed with drainage. The man got well. Several weeks later he returned with dripping from his nose—a rhinorrhea. He was told that cerebrospinal rhinorrhea following a fracture was apt to end in meningitis, and that there should be a piece of fascia lata put between the bone and dura. Two or 3 days later he returned and said his discharge had stopped. Some time later the man was brought to St. Barnabas unconscious and dying of meningitis, which had only been manifest 24 hours. Dr. Martland performed the autopsy and found what looked like a cyst under the lateral ventricle. This cyst was washing its fluid through his frontal sinus. This has happened in a number of cases reported in the literature.

Case 2. Recently we had a man who had been shot through the frontal sinus. He was operated upon in the usual way by removal of all fragments, and drainage. The bullet having entered deep in the brain could not be obtained. He also apparently recovered, but 10 weeks later died of fulminating meningitis, the same as the others. When Dr. Martland, in performing the postmortem, came to the bullet, he found it covered with a piece of

directly into the brain, and the patient has a rhinorrhea; *and, if he does have rhinorrhea, he has a fistulous tract through the frontal sinus into the brain itself* which remains open, and with each infection of his nose there may be an extension into the meninges. Therefore in a *fracture of the frontal sinus, ward off an ingrowth of mucous membrane* at any expense, regardless of how good the patient's condition is. *Principle: Put in something, skin or fascia, between the mucous membrane of the nose and the cerebral tissue, in perforating wounds through the accessory sinuses.*

Fracture through the orbital roof. A man was brought to the City Hospital unconscious, with a black eye and a subconjunctival hemorrhage. He soon regained consciousness. When the swelling disappeared from the lids, patient discovered that he did not see with the injured eye. Ophthalmoscopic examination was negative, as was the roentgenogram (although one of the plates was suspicious of a fine fracture of the orbital roof). His vision was only light perception in a small part of the field. There was slight tenderness above the eye and *on pressing the globe back into the orbit*. Such cases are usually the result of a fracture which goes through the orbital canal, with hemorrhage into the sheath of the optic nerve, the hemorrhage causing pressure on the nerve. Experience shows that all these cases develop an optic atrophy in about 4 weeks, with a totally white nerve.

Operation in the above case disclosed a crack of the orbital roof which extended through the optic canal. The fracture was followed through the canal, working from the superior (orbital) surface, and release of pressure by removal of the bone and evacuation of the inflammatory exudate and hemorrhage, restored vision to 20/40.

As far as I know, these cases have not been attacked surgically on a basis of the known pathology of pressure from hemorrhage at the optic foramen. Of course, if the sheath is distended with blood it must be opened, and if the nerve itself is ruptured, operation can do no good, but I am persuaded that with our present knowledge these cases



Walling Off of Mucous Membrane of Frontal Sinus from Piarachnoid by Ingrowing of Skin.

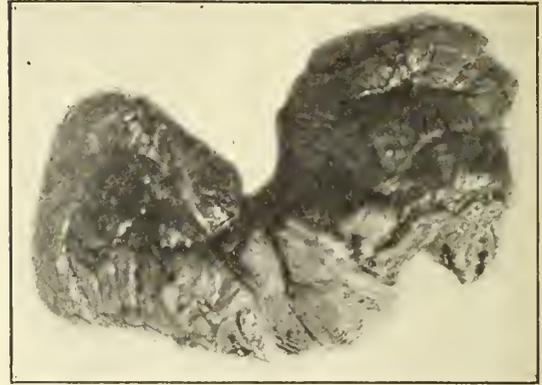
firm membrane that looked like rubber. The hole in the dura was still open and lined by a new membrane. Then the reason of the rhinorrhea and death came to me. *When an injury goes through an area of mucous membrane which proliferates rapidly*, such as the mucous membrane of the nose, *if the dura is open*, this mucous membrane of the frontal sinus grows in through the dural opening

should be explored if the patient has perception of light. I have, up to date, operated upon 4 such cases. In 2 the vision of the affected eyes was materially improved^{(1) (2)}; there was no effect, however, in the others, largely because the operation was too long delayed, or the cases not properly selected. *Principle: Intra-ocular blindness without ophthalmoscopic changes following a cerebral injury should be operated upon.*

(6) *Traumatic encephalitis without fracture of skull, increased intracranial pressure, or papilledema.* A boy was struck by an automobile and admitted to the City Hospital unconscious, with deep lacerated wound in the occipital region. Right side of mouth drawn downward; left knee-jerk greatly exaggerated. Right eye deviated toward the right; pupils round, equal, reacted to light. Right knee-jerk was suppressed. Babinski present on right. Shortly after admission patient vomited and had a severe convulsion involving entire right side. Blood pressure 88/44. An hour later had several slight convulsions. That night blood pressure 126/60; temperature 97° to 98°. Following morning temperature 102°, pulse 120, blood pressure 108/64. Patient still unconscious, with several muscular twitchings and convulsive movements; blood pressure that night 76/40; temperature 101°. Lumbar puncture gave 10 c.c. of fluid streaked with blood; *not under increased pressure.* Blood pressure then rose to 130/82. Following day twitchings of the body continued; temperature 108°.

Autopsy findings (Dr. Harrison Martland): Diffuse reddish-grey appearance of brain, with multiple punctate hemorrhages in the corpus callosum. No fracture of skull. Postmortem diagnosis: traumatic encephalitis; concussion of brain.

This group of cases has recently been described by Cazzaza⁽³⁾, of New York, and Martland, of Newark. *Principle: The absence of any nerve head changes with a blood tap not under pressure would speak against further increasing the existing cerebral trauma by any operative procedure.*



Multiple Punctate Hemorrhages Into the Pons.

METHOD OF OPERATING

In all cases of cerebral trauma in adults the operation should be done under local anesthesia, because ether or chloroform increases the cerebral congestion, which we are trying to avoid, and eliminates the most valuable aid to removal of fragments of bone and loose blood from the cerebral tissue; that is, the expulsion force of sudden and repeated increases of the cerebral pressure, which is associated with the impulse of coughing and straining. After the dura has been well exposed, have the patient cough, cough, cough, and if there are any small pieces of bone or loose blood, or even a small foreign body (piece of bullet), they will gradually be brought to the surface of the brain. In which case they can be gently washed away under a stream of water.

CONCLUSIONS

An effort is made to classify cerebral injuries clinically, and to elucidate principles in their treatment, among which the following are of importance to the ophthalmologist:

(1) There should be an expert ophthalmologist in daily attendance on all cases of cerebral trauma.

(2) Repeated ophthalmoscopic examinations are necessary in the early diagnosis of compression from cranial injuries.

(3) Visual fields will often localize the site of the cerebral trauma.

(4) Papilledema with a rising systolic and

falling diastolic—increasing pulse pressure—associated with a disproportionately slow pulse, is among the most important signs of increasing intracranial pressure, calling for operation.

(5) In cerebral trauma during the early stage, i.e., during the first 24 hours, ophthalmoscopic examinations seldom show papilledema; but, if the cerebral shock is great, the vessels of the nerve head are very small, giving the appearance of an anemia of the nerve and retina. This is a sign of cerebral shock from disturbance of the sympathetic mechanism in the brain itself. This anemia of nerve head and retina suggests stimulation of the vascular system, not a further increase of the trauma by operation.

(6) When a secondary edema of the brain occurs, a papilledema may appear, its presence, however, *depending upon* the location and direction of the increase in the intracranial pressure by the edema.

(7) Injuries confined to the anterior part of the frontal lobe do not produce papilledema. Injuries of the posterior fossa *with* occlusion of the iter produce a high degree of papilledema and considerable swelling of the nerve head. Injuries of the cerebral hemispheres with secondary edema produce a moderate degree of edema, with but little swelling. This papilledema may last for months, or may rapidly disappear.

(8) A cerebral trauma followed by loss of vision of one eye, without ophthalmoscopic change, should be subjected to a decompression operation at the optic foramen or in the nerve sheath if perception of light is present. After atrophy has appeared, the result of such an operation is apt to be disappointing.

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ESSENTIAL HEMATURIA: Report of a Case with Histologic Examination of the Kidney

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Hematuria, always an alarming and dramatic symptom, may be due to a variety of causes, among the more common and important of which are renal tuberculosis, calculus, and malignancy, and when persistent or recurrent hematuria is encountered the assumption is that one of these 3 conditions is probably present or will ultimately eventuate.

The existence of an essential or cryptogenic form of hematuria has been questioned by some but the evidence of its occurrence is sufficiently extensive to demonstrate that hematuria can and does occur the etiology of which may be exceedingly obscure.

On the one hand, there are those like Schenck⁽¹⁾, who believe that until a case is found in which there is no doubt that the kidney was entirely normal, in every part by serial section, essential hematuria may be considered as non-existent. On the other hand, as pertinently stated by Conner and Bumpus⁽²⁾: "When a careful cystoscopic examination demonstrates hemorrhagic urine coming from one or both kidneys which give normal functional tests, and the pyelograms are negative, a diagnosis of essential hematuria is warranted. To assert that such a diagnosis means that an early neoplasm, non-opaque calculi, or an obscure infection has been overlooked would seem to discredit the perfection of modern urologic technic or the capability of the examiner."

There seems little reason to doubt that renal hemorrhage occurs, the etiology of which is obscure or in doubt, or to dispute the contention of Braasch⁽³⁾ that "it would be difficult to assign any one cause to the variety of conditions which are grouped under the term *essential hematuria*".

Disposing, apparently, of the assumption that hematuria of the essential type is the result of single or multiple diseases not far enough advanced to be diagnosed at the time of examination, is the investigation of Bumpus⁽⁴⁾ of 155 cases seen at the Mayo Clinic since 1907, in only 6 of which did any definite renal disease subsequently develop during the intervening 5 to 20 years. These findings substantiate a similar review of 30 cases by Levy⁽⁵⁾ so that it is difficult to avoid the conclusions that:

(a) Hematuria may occur in the absence of serious renal disease in its incipiency.

(b) Hematuria may be due to a local lesion which may be minor in character. It is evident from the reports of numerous observers that the causes of this type of hematuria which, perhaps, as suggested by Bumpus, it is preferable to speak of as renal epistaxis as originally suggested by its discoverer, may be most varied in character.

A number of cases are on record in which there were minute lesions of the blood-vessels; in others a bleeding has been ascribed to unilateral nephritis; and the existence of renal hemophilia^(6,7) or a relation to purpura hemorrhagica⁽⁸⁾ or purpura following intermittent blood-stream infection⁽⁹⁾ have been advanced as possible causes.

The possibility that unilateral hematuria might be toxic in origin has been suggested and disputed. The case reported herewith is believed to be of such a character and is reported because of discussion concerning the possibility of unilateral renal hemorrhage resulting from toxic lesions. The report is made possible by the courtesy of Drs. Theodore Senseman and C. H. deT. Shivers, to whose services the patient was admitted.

F. H., colored male, aged 42 years, married, occupation laborer, was admitted to the Atlantic City Hospital, March 2, 1927. The family history is unimportant. The patient denies any past illness necessitating medical attention. He has been obstinately constipated for some time and has a chronic, loose, productive cough most marked in the morning. No history of night sweats, nor marked

loss of weight which has varied only 3 lbs. during the last year. There is no past history involving the urinary tract except nocturia (one or twice nightly) for the past year, exaggerated by the use of intoxicants in which he indulges rather freely. There is a history of some little dribbling after urination. The stream has always been normal and the urine clear and translucent. Denies any venereal infections.

Three weeks prior to admission the patient went on an alcoholic debauch during which he consumed a large amount of "apple-jack". On the following day he noted that his urine was pink in color. There were no other urinary symptoms but the urine has become progressively more blood-tinged until now it resembles pure blood. There was no renal colic nor genito-urinary pain.

Since the onset of this attack the patient has abstained from alcoholic liquors and now is conscious of symptoms which he recognizes as premonitory of delirium tremens. There is marked anorexia, progressive weakness, and during the past 3 weeks there has been a slight loss of weight.

The physical examination discloses nothing of importance.

The blood count showed: Hb. 9.66 gm.% (70% Dare); RBC 3,330,000; WBC 10,100; C. I. 1.0; Polys 72%; S. M. 15%; L. M. 8%; Eosin. 3%; Transitional 3%.

Blood Wassermann (Kolmer) negative.

Sputum showed no tubercle bacilli, occasional pus cells, small and varied bacterial flora, mainly streptococci, with small numbers of pneumococci and *M. catarrhalis*.

Report of a cystoscopic examination by Drs. Shivers and Bossert follows: The bladder and the bladder mucous membrane were normal, no growths nor calculi being seen. The trigone was slightly elevated and the ureteral orifices normal in appearance. Spurts of bright red blood were seen coming from the right ureter. Above the elevation of the mucous portion of the right ureter was an opening leading into a diverticulum of moderate size the capacity of which could not be told without a cystogram. A No. 5 x-ray catheter

introduced into the right ureter met obstruction at the uteropelvic junction; a similar catheter was passed 28 cm. into the left ureter without difficulty.

Indigo-carmin injected intravenously appeared from the left ureter in 3½ minutes; from the right ureter in 4 minutes. The urinary flow from the left ureter was clear and continuous; from the right it was intermittent due to blocking by blood.

The x-ray picture was reported as showing a hiatus in the line of communication to the superior calyx of the right kidney which "may be due to incomplete injection or a pathologic defect. It is impossible to say which."

No growth was obtained on culture of the urines from either catheter. The left kidney specimen showed a faint trace of albumin and one granular cast; the right kidney urine was loaded with blood.

Nephrectomy was advised and done by Drs. T. Senseman and C. H. deT. Shivers, March 12, 1927. The patient made an uneventful recovery and was discharged 15 days later to return to the dispensary.

The kidney as received in the laboratory measured 12 x 5 x 4 cm. and weighed 155 grams. Grossly its appearance was normal. The capsule stripped easily and smoothly and there were no cysts, calculi, abscess cavities, tubercles or other gross pathology. When sectioned longitudinally occasional punctate hemorrhagic areas were seen in the cortex.

Sections were prepared from various areas after formalin fixation. The salient features of the histology were the presence of punctate intraglomerular hemorrhages, which, somewhat more diffuse, were also seen in the tubular positions of the slide. Evidence of tuberculosis or early neoplasm was not found.

It would appear, from the evidence at hand, that this case of hematuria, was due to a unilateral renal lesion of toxic origin.

Despite the difficulty of finding an acceptable explanation of the mechanism of unilateral renal toxic lesions, that they occur, the literature of essential hematuria suffices to demonstrate and their possible presence must be acknowledged, borne in mind, and ruled

out in the presence of unilateral hematuria before the diagnosis of renal tuberculosis, or neoplasm—with the prognosis and aftermath entailed—is made.

In the absence of evidence warranting either of these diagnoses the patient is entitled to a trial, at least, of local measures, such as the injection of silver nitrate solution into the renal pelvis, before nephrectomy is insisted upon. Where the lesions are accessible, such measures have been used with excellent effect; where, as in the case at hand, they are inaccessible, nephrectomy is the only effective treatment.

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THE BLOOD SEDIMENTATION TEST; ITS DIAGNOSTIC AND PROGNOSTIC VALUE

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Since publication of the Wassermann test for syphilis numerous attempts to find a specific reaction for other contagious diseases have been made without results. The value of a more recent serum test, the so-called "tubercumet reaction" for tuberculosis, which was supposed to be a specific test enabling us

to differentiate, serologically, between active and latent tuberculosis, has been sharply disputed during the past 2 years. The medical profession, still waiting for a specific test, grasps eagerly every new reaction, even though it is a makeshift, serving as substitute for a better one to come while helping to confirm our clinical diagnoses.

Blood sedimentation as a method of clinical examination is a comparatively new test. Let us repeat briefly some of its history and theory.

The blood is a suspension of blood cells in a liquid, the plasma. When not flowing in the blood stream the cells have a tendency to settle by gravity and by a physiologic power, called agglutination. This process cannot, as a rule, be observed, as another physiologic process, blood coagulation, by which the suspension-liquid is changed into an elastic reticulum, interferes. After a certain length of time, the blood clot presses out the serum and so another separation between cells and fluid takes place.

But there are occasions where separation of the red blood cells and the plasma can be observed in blood recently withdrawn, before coagulation prevents the cells from following their natural tendency. Observations of that kind were made by the old time physicians when blood-letting was considered as one of the most important methods of treatment. The majority of the patients on whom this phenomenon was observed, suffered from high fever. Therefore, the physicians of a century ago called the early appearance of a plasma level above the red clot "crusta phlogistica", a term coined by Hunter in 1797. But it was also well known to them that the crusta phlogistica appeared in cases of pregnancy as well as in pathologic conditions.

The man who should be thanked for the fact that these obsolete observations have become a modern clinical technic, is Fahraeus, a Scandinavian scientist. He studied this phenomenon first in normal pregnant women, since it is a very well known fact that the

serum of such women shows a definite colloid instability (Sachs, Oettingen, Daranyi, Baum, Schumann, Pinner). The addition of sodium citrate or oxalate, which prevents the blood from coagulating, made possible a much more precise and extended investigation. Since about 1916, sedimentation of the red blood corpuscles has become not only a topic of clinical study but, also, of physicochemical experimentation. Fahraeus, Linzenmeyer, Starkinger, Westergreen, Hober, are the outstanding names in connection with this work. It was easy for them to study blood sedimentation in normal and pathologic cases after having added the chemicals which prevent coagulation and the observations of our old teachers of a century ago could be confirmed and made to serve as a precise quantitative method. All kinds of infections and inflammatory processes were found to cause an acceleration of sedimentation of the red blood cells, but this test gave, also, positive results in cases of pregnancy and malignant tumors. Even during menstruation and in certain psychoses, such as schizophrenia, a positive test has been found occasionally.

There is as yet no agreement about the theory of this phenomenon. The most commonly accepted idea is that the sedimentation speed of the red blood cells depends not only upon the amount of fibrinogen but, also, of the blood plasma. By controlled experiments with a group of red blood cells put into different plasmas, it has been found that plasma plays an important role in the process and that the speed increase is dependent upon the content of fibrinogen.

The Westergreen technic is, in our opinion, the simplest and most reliable of all the technics reported in the literature; it is as follows:

To prevent a blood coagulation, a 2 c.c. syringe is filled with 0.4 c.c. of 3.8% sodium citrate solution, the cubital vein is punctured and 1.6 c.c. blood is withdrawn—which means that the syringe is filled up to the mark of 2 c.c., and the blood-sodium citrate mixture is then put into a test tube. By shaking, we attempt to get an equal distribution of the blood cells. The blood is sucked up into a pipette which shows a scale of 200 millimeters. The

(1) F. Baum and L. T. Black: Die Tubercumetreaction, Beitr. zur. Klin. der Tuberculose, Bd. 64, H. 3/4.

content between the zero mark and the mark 200 equals 1 c.c. It is not necessary to fill the pipette immediately after the venal puncture, as the citrated blood gives the same sedimentation after standing in the test tube for a few hours. The pipette is fixed, then, into a frame and the time noted. After a certain time the sedimentation of a red column in the pipette is noticeable. We read, usually, after 1 hour, a second time after 2 hours, and finally after 24 hours. The most important reading is the first.

Normal blood shows a sedimentation between 2 and 5 mm. for male and between 3 and 7 mm. for female individuals. In cases of inflammation, followed by an even microscopic destruction of cell tissue, for instance in active tuberculosis, the sedimentation varies according to severity of the process and sometimes reaches a speed of 100 mm. or more after the first hour. The reading after 2 hours is, therefore, misleading in cases of high sedimentation speed, since the red column can fall only 120 mm. at its maximum. In such cases, obviously, the sedimentation stops during the second hour. In cases in which the reading after 2 hours shows less than 120 mm., it is advisable to combine the readings of the first and second hour by this formula:

$$\frac{a + b}{2}$$

Suppose a patient shows a reading of 16 mm. after 1 hour and a reading of 28 mm. after 2 hours, the result would be:

$$\frac{16 + 28}{2} = 15$$

The test should not be performed during menstruation, since it is positive then even in normal individuals, probably due to colloid instability of the blood serum as mentioned above.

The most interesting observations with this

test have been made in pulmonary tuberculosis. Our judgment in these cases rests upon 2 factors: the amount of involvement and the activity of the process, the former being the anatomic, the latter the biologic part of the problem. In general, the activity is the more important factor, but, also, the more difficult to be discerned.

Our diagnosis and prognosis depend not only upon the physical findings and the x-ray picture, but also, upon other important symptoms; for instance, variation of the temperature and the pulse rate, changes in weight, the white and differential count, and other laboratory findings. The blood sedimentation as an extremely sensitive and graduated reaction in inflammatory processes is suitable to increase the number of methods by which we can obtain a more certain and more differentiated knowledge about the biologic importance of a tuberculous process.

The value of the test may be illustrated by some instructive cases:

(1) A patient with a one-sided pulmonary tuberculosis is admitted to the hospital. Previous to admission he has been treated by artificial pneumothorax but does not feel any improvement. The sedimentation test is 66. The x-ray and physical examination, correspondingly, show an incomplete collapse. Two weeks after admission an ideal collapse is obtained. The sedimentation goes down to 5.

(2) A patient with pulmonary tuberculosis has been in bed for 14 months. The sputum became negative and the clinical findings suggested an arrested condition. The sedimentation which had been high at the time of admission (58), went down to normal (7) after 14 months bed rest. The doctor prescribed exercises 3 hours daily for 2 weeks. Patient felt fine, the sedimentation, however, went up to 34, an alarming symptom. The next day a hemorrhage occurred.

The sensitivity of the test is so distinct, that it shows differences, before physical signs, x-ray, sputum, temperature or even the blood count indicate a change for the worse or for the better. A repetition of the test at intervals will give in the most practical and sensi-

tive way a record of progress of the disease. It is, therefore, of great prognostic value.

The test is reliable both in incipient and far advanced cases of tuberculosis. Early diagnosis is often uncertain because of the difficulty to differentiate, for instance, between bronchitic processes of nonspecific or tuberculous character. A simple bronchitis is not supposed to influence the sedimentation speed as soon as the acute stage is over. Active tuberculosis, however, gives a positive reaction in the majority of cases. The test may serve as a guide to determine if a case is arrested or not. If physical findings are questionable, pulse and temperature normal, sputum negative, and sedimentation shows an increase, we would not hesitate to consider such a case as nonarrested. On the other hand, inasmuch as there is no activity in a case with a silent cavity, a patient may be considered as practically arrested in spite of some physical signs but with a negative sedimentation.

Another use of the test is the following: Some authors have found that in latent cases of tuberculosis, when minimal doses of tuberculin were injected, the test became slightly positive. Thus, the test enables us to perform the tuberculin reaction with much smaller doses, more sensitively and less dangerously, as far as the tuberculin mobilization of a latent focus is concerned.

One more word about nontuberculous individuals: In cases of acute infection the temperature does not go hand in hand with the sedimentation speed. We very frequently find during the first days of high fever normal sedimentation values. Sometimes the sedimentation reaches its highest point after critical decrease of the temperature. Such observations have been made in cases of influenza, by Westergreen and others. Apparently, the test is influenced only by destructive processes in the tissues and not by bacteriotoxic action.

As a help in the differential diagnosis between oöphoritis and appendicitis, the test has been used with good results in many hospitals. It has been found in long series of patients that there is a definite difference of the sedi-

mentation speed within the first 18 hours of the illness. Appendicitis cases during that initial period show only a slight increase up to about 14 to 16 mm., whereas oöphoritis goes up to 30 mm. It seems as if in acute inflammations of the ovaries the subjective symptoms do not indicate the real onset of the illness but that the ascending inflammation had been present in the genital tract before the illness became manifest. In appendicitis, on the contrary, the onset of the inflammatory process is accompanied very soon by subjective symptoms. After 18 hours, the sedimentation in appendicitis is, also, quite high and does not any longer differ from that in oöphoritis.

In a series of about 100 gynecologic cases we came to regard the sedimentation test as the best possible means for decision of the best time for operation with the least possible risk. A high reading indicates, regardless of normal temperature and white cell count, a latent pelvic infection which may be activated by an operative procedure. By postponing operation and using temporary conservative treatment the patient has a better chance of avoiding postoperative complications. Some writers claim that the test is of value as a differential diagnostic aid in benign and malign diseases. So a cancer of the mamma can be differentiated from an adenoma, a cancer of the prostate from a simple hypertrophy. Cancer of the stomach differs from an ulcer without inflammation by showing higher sedimentation values in the malignant changes, proportional to the destruction and normal values in the benign ones. The test is so sensitive that after a radical operation an increase in the sedimentation time indicates a recurrence. Our own experience is too limited yet, but so far the cases we have had seem to support this opinion.

We might add here, too, that pernicious anemia shows medium, the secondary anemias (traumatic) normal values. The same applies to endocarditis lenta in differentiation from simple endocarditis. In conjunction with the clinical diagnosis, this test is a valuable differential diagnostic aid.

SUMMARY AND CONCLUSIONS

(1) The sedimentation test is an extremely sensitive reaction indicating, in the majority of cases, an inflammatory process which causes destruction of cell tissue.

(2) It is not specific for any particular infection.

(3) In connection with our clinical findings it seems to be of greatest diagnostic and prognostic value in active cases of tuberculosis.

STRABISMUS IN INFANCY AND EARLY CHILDHOOD

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In discussing the question of strabismus as I propose to in this paper it must be understood that we are not considering the paralytic or traumatic type, but only that class of cases which appear in the first 5 years of a child's life without apparent gross evidence of its etiology. These are the cases which if intelligently handled early offer the best prospects for correction of the cosmetic defect as well as the best hope for establishing binocular vision, without the last of which the patient is doomed never to enjoy the advantages and blessings of stereoscopic perspective. With modern operative methods it is within the bounds of possibility to approximately correct almost any deviation of the visual axes from the parallel, at any age, but if no measures are instituted before the fifth or sixth year the proportion of those corrected and in which binocular stereoscopic vision is effected will be practically nil.

It is a fallacy strongly entrenched in the minds of the laity and, sad but true, in the minds of many physicians, that there is little need for doing anything for these cases until the child begins to attend school, or even later, and it is my purpose in this brief paper to show in a very elementary way why this idea is so entirely without merit, and indeed vi-

icious, if we have the future welfare of our little patient at heart.

The physical examination of children in the schools, which is practiced now in every progressive school district, is doing wonderful work in discovering defects in vision and other physical abnormalities, and stressing their correction, but in the vast majority of cases of early strabismus the school age is too late to afford the child the relief which might have been attained had advice been sought at the earliest inception of the defect.

Hence it would seem that it falls within the province of the family physician, who is usually the first one to be consulted, or who may be the first to discover the fault, to urge the need for immediate investigation as to the cause and the proper steps to be taken for the remedy.

From personal observation covering many years of private and clinical experience in the practice of ophthalmology, and from the published observation of many other oculists, I am convinced that the man in general practice who recognizes and preaches the need for early treatment of strabismus is the exception rather than the rule. Patient after patient coming into the clinics upon the insistence of school examiners and nurses, give the history of having received advice from their doctor that no attention was necessary before school age or even later, and the same holds true though to a lesser extent among those referred in private practice.

Before we can intelligently understand and discuss the need for early treatment and the methods to be employed, we must devote a few thoughts as to what are the underlying causes of early strabismus.

Nearly every mother has a firmly rooted conviction as to the reason why her child is cross-eyed. Cutting teeth, a fall on the head, an attack of measles or whooping cough, a sudden fright, excessive crying, exposure to bright light, and numerous similar reasons are advanced, and while it may be true that the defect has first been noticed and the relation of the supposed cause and effect seem to be apparently very real in connection with these

incidents, yet there is invariably a physical abnormality in function, or a real pathology, without which the condition would never have developed as a direct result of these supposed causes.

Probably no one subject in ophthalmology has been discussed more than the etiology of strabismus. It would be difficult to find 2 oculists today who would give even approximately similar definitions as to its cause. It is not strange, therefore, that so many things have been mentioned as etiologic factors, and so many remedies suggested for its relief.

There are at present 3 dominant theories relative to the cause of squint, each of which has numerous ardent advocates and in each of which there are certain elements of truth which must be taken into account in the management of any individual case.

(1) *The muscular theory* which places the blame on an over-developed or over-acting muscle.

(2) *The accommodative theory* of Donders which holds that squint is produced by a disturbance of the relation of accommodation and convergence due to hypermetropia, or far-sight, either alone or associated with astigmatism.

(3) *The fusion theory* which is based upon a lack of central ability to accept the image presented by the 2 eyes and fuse them into a single picture.

The advocates of the muscular theory claim that a too strong overacting rectus muscle, or one too short or too long as compared with its antagonist, acts in excess of its antagonist and causes the eye to turn in or out. If this were true in every case the remedy to be sought would be either a tenotomy or weakening of the offending muscle, or the advancement or strengthening of the other offending muscle, a *sine qua non* which has never been realized by any observer. And yet many cases have received relief by methods justified by this theory.

The advocates of the accommodation theory base their views upon the fact that the vast

majority of cases of convergent strabismus or cross-eye are victims of moderate or high degree of hyperopia or far-sight, and those of divergent strabismus are afflicted with myopia or near-sight. In order to overcome the blur produced by hyperopia an effort of accommodation or focussing is necessary, and as the act of focussing, or accommodation, is intimately associated with the converging function of the eyes, an over-exercise or over-stimulation of the muscles of convergence is set up whereby the internal recti muscles assume a greater strength than the externi and the tendency to a squint or convergent strabismus is established. This theory is substantiated in many cases by the fact that correction by glasses of the hyperopia or far-sight, and hence a lessening of the need for accommodation and its ally convergence, permits the eyes to assume a normal axial relation and the squint is overcome.

The fusion theory is based upon the ability inherent at birth, but only developed in full during the first 5 years of life, and only possible of development upon the presentation equally by each eye to the brain of an equally or nearly so clear-cut image of the object under observation. Consequently, any difference in the acuity of the 2 images, or any defect in the musculature of the orbit preventing a similar image at a similar point on the retina of each eye, prevents proper development of this function and produces a brain blindness or lack of fusion ability which throws out no incentive to the accommodative or convergence centers to maintain an even balance and hold both eyes in such position that an equally clean-cut image may be presented to symmetrical points in each retina and thence by transmission to be fused by the center controlling this function.

Each of these 3 theories is so intimately dependent in some details upon each of the others that all must be taken into consideration in dealing with any individual case. How, then, and why do these theories fit into the management of our squint cases and why the need for the earliest possible study and treatment of them? The object to be attained is

two-fold—first, that of producing an even muscle balance and a so-called straight eye, and, second, to preserve a normal function in each eye and so make possible binocular stereoscopic vision.

Suppose for example that upon birth of the child with perfectly normal eyes, or within a very few months of birth, one eye should be permanently covered with a bandage and no use of the organ permitted for several years. The result would be that the visual function in that eye would not develop, the fusion center and function in the brain obviously could not develop, and upon uncovering this eye we should find a vision way below that of its fellow; a retina incapable from non-use of registering a similar image with the other eye, and a brain center ignorant of the possibilities of binocular vision, and as these functions can only be developed in the early months and years of life, it is too late to accomplish anything further than to produce a cosmetic result only.

This is practically what happens in every early case of squint if neglected. The eye which squints, because of the fact that the object fixed by the acting organ does not produce an image at a relative or symmetrical point upon the retina of the squinting eye, cannot transmit to the brain centers an equal picture with that of the good eye, and as a result a confusion of images or a doubling of same is produced which is intolerable to the nervous sensibilities of the child. Unconsciously, then, the child comes to ignore the impression of the squinting eye or entirely suppresses the vision, so that to all intents and purposes the eye might as well be completely covered as it no longer functions and, therefore, its further visual development ceases or becomes exceedingly deficient.

Likewise since the vision of one eye is suppressed entirely the brain centers never learn of the existence of 2 images being received and the center for fusion of them never begins to function nor develop.

Although it would be altogether too dogmatic to set a definite time limit upon the

years during which the function of normal vision and fusion may be acquired in any given case, yet it is generally agreed by all ophthalmologists that beyond the age of 7 years fusion cannot be acquired, and that a much earlier time is the limit for acquiring the normal visual sense. Hence, how self-evident it becomes that study and management of the elementary causes of any case of squint in infancy must be undertaken early if success is to be assured. And does it not seem perfectly clear that each of the 3 theories mentioned must be considered since the premise upon which it is based may in various cases be either the cause or effect of the premises upon which the others are presented?

Here is where the argument for the aid of the oculist begins. Unless the family physician is skilled in the use of various optical instruments in critical examination of the interior of the globe, and estimation of the refractive index, as well as any defect in the media of the eye, the case should be turned over to the man who is familiar with the various methods enumerated, for only after a careful analysis of the findings of such an examination can definite plans be laid for the most effective treatment. It may be argued that a fundus examination or refractive test is almost impossible in a babe of a few months and there is a measure of truth in the assertion, but with patience and perseverance much can be learned without which it would be easy to make a false start in the management necessary until such time as a more detailed examination is possible. I hold it perfectly justifiable to lightly anesthetize an infant for a study of its eye-grounds and media, if it cannot be accomplished otherwise, and with the advent of the electric ophthalmoscope, retinoscope, and the hand slit-lamp, many of the difficulties are overcome.

I shall not attempt to give in detail the treatment of squint in any given case as it would be governed by so many variable factors that the subject could hardly be covered to advantage, but I would like to give in outline the main objects to be sought and methods for

their attainment. In all cases of squint, excepting possibly the alternating type in which the same need would not apply, an effort should be made to educate the ability to fix with the squinting eye and by forcing its use to stimulate development of visual function in the eye and the corresponding brain centers. To absolutely exclude vision in the good eye by completely covering it for a variable period is the best method, but in practice exceedingly difficult to accomplish because of carelessness or lack of coöperation, or unwillingness upon the part of the parent or attendant in carrying out orders. A substitute which is of value is to keep the good eye in a state of mydriasis for long periods and thus by paralyzing its accommodation forcing the faulty eye to carry the burden of vision alone and unaided. Of course it goes without saying that either of these methods should be intelligently controlled by the physician and no definite time limit may be placed upon its continuance. In addition, care should be taken that so far as possible the babe's position in bed or the chair is such that the approach of the attendants, the direction of sounds of interest to the child, the direction the eye must be turned to grasp toys and the like, shall be opposite to the direction of squint, thus throwing a stimulus upon the lesser used muscle for constant exercise.

As early as possible, usually by the third year and sometimes earlier, a careful estimate of the refraction should be made and proper glasses for its constant correction ordered. This for the purpose of relieving the accommodative strain necessary to overcome any refractive defect and to break one link at least in the chain of the vicious circle.

Frequent séances of exercise for the weaker muscles by attracting the child's attention in such a way as to stimulate their use should be systematically carried out, and as the child becomes older, various orthoptic and stereoscopic exercises may be instituted in an endeavor to stimulate the desire for fusion. I deem it almost needless to urge that during this period, which should bring our patient up to 4 or 5 years of age, any other physical abnormality

should be given due attention, especially the correction of any fault in the nose or throat which by toxemia or insufficient drainage or respiration might act to retard the child's normal physical development.

It is the observation of many oculists that these measures have produced the happiest results time and again, and have yielded straight eyes with binocular vision permanently, and that non-observance of treatment is largely responsible for the difficult and well-nigh impossible cases we see with such frequency.

As to operative methods and the wisdom of early or late operative intervention, the subject is fraught with too many obstacles and too much diversity of opinion for me to venture into their discussion. Every case is a problem unto itself and the pros and cons of when to and when not to operate must be governed by careful study of all elements entering into the case complex. It is, however, very generally accepted by ophthalmologists that operative measures should be instituted only after a reasonable time has been devoted to non-operative methods without desired results, and with a few notable exceptions among recognized authorities most of them desire to wait until such time as operation may be successfully performed under local anesthesia.

There are many details and angles of this big subject which, because of lack of time and an unwillingness upon my part to burden you with dry technicalities, I have not even hinted at, but I hope that I may have convinced my hearers upon the importance of:

- (1) Early recognition of any muscular deviation of the eyes from the parallel.
- (2) The institution of study and treatment at the very first inception of the defect.
- (3) The importance of stressing the functional treatment and development needs rather than the cosmetic in infants and small children.
- (4) The obvious importance of seeking the aid of an ophthalmologist in the management of these cases.

BUNDLE BRANCH BLOCK ASSO- CIATED WITH AURICULAR FIBRILLATION

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Since the introduction of electrocardiography recognition of bundle branch block has become common. The association of auricular fibrillation with bundle branch block, while not extremely rare, has seemed sufficiently rare to make it worth while reporting a case.

Lewis and his co-workers⁽¹⁾ have shown clearly that the excitation wave follows a definite course in its spread over the ventricular muscle, entering the ventricles by way of the Bundle of His, passing along the main branches of the bundle and their ramification, and spreading through the Purkinje plexus, which lines the inner surfaces of both chambers. The excitation wave spreads outward from the Purkinje structure through the ventricular walls, toward the outer surface of the heart. The excitation wave travels 10 times faster in the special conduction system than in the ventricular musculature proper.

Wedd and Stroud⁽²⁾ proved that the period of spread of the excitation wave in the ventricle correspond to the duration of the QRS complex.

Eppinger and Rothberger⁽³⁾, in 1910, reported the experimental work on dogs, in which they severed the main right and left branches of the Bundle of His. When the right branch was cut, the normal ventricular complex was replaced by a diphasic complex of high amplitude, the QRS group was deflected downward, its duration was increased, and the T wave was directed upward. Division of the left branch revealed a similar change in which there was a reversal in duration of the complexes. Since then, numerous workers have reported further experimental proof in the interpretation of the bundle branch block cases.

Pardee⁽⁴⁾ describes the characteristic elec-

trocardiographic findings in bundle branch block cases as follows: (1) The ventricular complex has an abnormally wide QRS group, the duration being for the human heart at least .14 sec. (2) The largest wave of the QRS group is oppositely directed in leads 1 and 3, either upward and downward, or the reverse of this if the left bundle branch is affected. (3) The QRS group always shows notching or thickening of the ascending or descending portion in more than one of the leads, or there may be notching of one of the peaks. (4) The T wave is opposite in direction to the largest wave of the QRS in all 3 leads. (5) The QRS group shows an increased amplitude.

Auricular fibrillation is established in this case by the absence of the P wave preceding the ventricular complex, and the irregularity of the latter. Apparently, the process in the auricular and ventricular musculature, and in the conduction system, is the result of a diffuse fibrous myocarditis.

The association of auricular fibrillation in the face of a bundle branch block, adds to the severity of the prognosis. In a series of 37 cases of bundle branch block, Hepburn and Jamieson⁽⁵⁾ reported a death rate of 73%, the average duration of life being 5½ months, with a maximum of 23 months. These figures are in accord with other observers. Talley and Reed⁽⁶⁾ in a series of 28 cases of bundle branch block, reported 18 deaths. The outlook in these cases is poor. The majority die in a few months. The degree of cardiac degeneration apparently is more important than the age in prognosis. In their series the left branch cases were among the shortest lived.

The following case represents a right bundle-branch-block lesion, associated with auricular fibrillation.

Mrs. J. G., white, age 57, complaining of shortness of breath on exertion, precordial pain with absence of characteristic radiation, swelling of the ankles, pain over the liver area, duration 12 months. For the past 6 months has been complaining of slight attacks of dizziness, but no loss of consciousness. Had

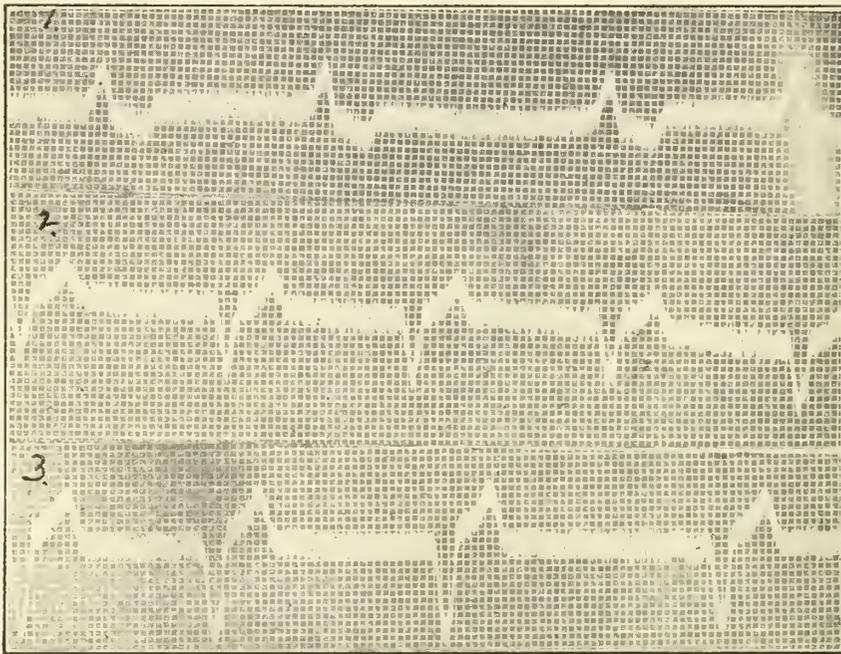
pneumonia and pleurisy about 19 years ago, otherwise past history is essentially negative.

Physical examination revealed a slightly dyspneic, anemic, white female, with slight cyanosis but no jaundice. Head essentially negative. Chest revealed dullness over both bases posteriorly, with roughened breath sounds over bases extending to the infra-scapular regions, and scattered moist râles. The left border of the heart percussed 12 cm. from the midsternal line in the fifth interspace. Soft systolic blow at apex, not transmitted. Blood pressure 164/80. Pulse varied from 50-60 per minute. Liver was slightly enlarged and tender, with slight swelling of the ankles.

Urine showed a trace of albumen, with numerous hyaline casts. Urea nitrogen 18 mgs. per 100 c.c.

The electrocardiographic tracing showed auricular fibrillation, with marked notching and increased amplitude of the QRS group, Q-S interval .13-.14 sec.; inversion of the T wave in Lead I. The tracing represented a right bundle-branch-block, associated with auricular fibrillation.

Under rest, digitalis and caffeine therapy, patient showed slight improvement, but signs of decompensation persisted. The prognosis in this case is poor.



Auricular Fibrillation Associated with Right Bundle-Branch-Block.

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APHASIA, with Report of a Case

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Aphasia is a disorder of the faculty of language; and it has a number of varieties, in accordance with the particular part of the brain involved and the particular portion of the mechanism of this faculty that is injured. By the faculty of language we mean the processes by which we hear, see, and appreciate the meaning of symbols of language; and express to others by voice, writing, or gesture the content of our minds.

In speaking we use the organs of articulation, and this use involves the fine adjustment of a delicate muscular apparatus. In the act of expressing ideas we have to bring into play memories of the past muscular movements of this articulatory mechanism. These movements were learned by a slow and painful process during infancy. After the power of speech is acquired, the mechanism works steadily and almost automatically, because we have only to send a stimulus to the center which presides over stored-up memories of impulses to innervate properly the mechanism of speech. There is, therefore, a center for the memories of the movements of articulation—a center which is, of course, closely connected with the motor areas that directly innervate the larynx, pharynx, and oral and facial muscles. When a lesion destroys this center for speech memories, a person is unable to reproduce the words necessary for expressing an idea. When a person is thus troubled he is said to have a form of motor aphasia for which the particular name given is "aphemia".

In the same way there is a center for memories of the muscular movements concerned in writing; and when a lesion destroys this center the patient is unable to write, though he may be able to speak. This condition is called "agraphia".

Aphasia is classified as (1) motor, (2) sensory, and (3) mixed. According to the anat-

omic location of aphasia and the arteries involved we have 4 important types:

(1) Frontocapsular aphasia, characterized by "aphemia" (i.e. complete or almost complete inability to say a word); a lesion injuring the left third frontal convolution and often extending back to involve the internal capsule, an involvement of one of the ganglionic arteries. There is usually hemiplegia, but patient's intelligence is good, can write, read and understand spoken language perfectly.

(2) Parieto-occipital aphasia, characterized by "alexia" (i.e. inability to read or copy); a lesion in the occipital lobe extending sometimes into the angular gyrus, an involvement of the posterior cerebral artery, or Sylvian artery. In this type the patient can talk, understand and write well, but cannot read or copy. Usually there is some hemitaxia, hemianesthesia, or hemiparesthesia, and there may be slight temporary hemiplegia.

(3) Temporal or temporoparietal aphasia is characterized by "anomia" (i. e. unable to name objects), some mind deafness and paraphasia (i.e. stumbling speech); a lesion in the auditory psychic area or posterior two-fifths of the first temporal convolution, extending in severe cases into the parietal lobe or into the second temporal, and a cutting off to some extent of the association tracts between the auditory psychic and the visual area, an involvement of the terminal branches of the Sylvian artery or perhaps the trunk of the Sylvian artery itself. Here there is no hemiplegia, or only slight. There is some voluntary speech but coherence is seriously injured. May use words fairly but talks nonsense because of confusion, repetition and misplacement of words. In other words a person so afflicted has jargon aphasia. He cannot name, feel, smell, or taste objects; constituting anomia. He can read, write and copy only poorly (i. e. he has some alexia and agraphia). He can only poorly understand simple directions, showing some loss of general intelligence. Patient acts childish and emotional at times. There is usually some hemianesthesia, ataxia, asteriognosis, or all 3. There is some hemianopsia, which may not be permanent.

(4) Frontolenticular aphasia, the most common type, characterized by aphemia, with much agraphia, alexia, mind-deafness and hemiplegia; a lesion involving the branch of the middle cerebral that supplies the corpus striatum, the internal capsule, and the fibers converging into it from the second and third frontal and precentral convolutions. The occipital lobe must be affected by association tracts because of the difficulty in reading. Here we find extensive aphemia (i.e. inability to talk voluntarily or to say only a few simple words). There is some difficulty in understanding, at least complicated sentences (i.e. some mind-deafness). There are rarely any sensory symptoms. Sometimes a very decided hemiplegia.

Etiology. In the majority of cases aphasia depends upon a destructive lesion of the brain such as hemorrhage embolus, thrombus, or tumor. A functional form, usually transitory, sometimes occurs in great excitement; after epileptic seizures; in hysteria; in migraine, and in certain toxic conditions such as uremia and diabetes.

Prognosis. Depends upon the nature and extent of the lesion, intelligence and age of the patient. Children may learn to speak again by educating the other side of brain. In old persons it may be permanent.

Treatment. In children consists in reëducation. In functional cases, treatment of co-existing condition. Removing the cause as far as possible.

The following case report may be of interest.

Man, aged 54, white, occupation boatsman. Complaint: (1) Unable to talk; (2) walks with limp in right leg; was well until about a month ago when he was attacked with a spell of weakness, coming on suddenly, resulting immediately in limp in right leg and weakness on whole right side, and inability to say a word.

Past history unimportant. Denies any form of venereal disease. No history of any hereditary disease. Is married and has 1 child, living and well.

Physical examination. Man of average

build. Tries to talk but unable to say anything except the one word "yes". Eyes, ears, nose and throat negative, except for slight weakness on left side of face. Argyll-Robertson pupil not present. Weakness of right arm but not paralyzed. When he walks he drags his right toe. Reflexes exaggerated, especially on right side. Writing: mind deafness, unable to understand what is said to him. Blood Wassermann 4 plus.

Prescribed rest and symptomatic treatment, and a course of nearsphenamin. At the end of 3 months patient had greatly improved; able to talk and write again, and gained part of strength back but on last examination still had slight dragging of toe.

Now what happened in this case? There was hemorrhage from a lesion involving the branch of the middle cerebral artery that supplies the corpus striatum, the internal capsule, and the fibers converging into it from the second and third frontal and precentral convolutions of the brain.

THE VANISHING AMERICAN

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Life, down through the ages, has been a colossal struggle between man and germs for existence. Kipling says, "There are only 2 classes of mankind in the world—Doctors and Patients." The science of medicine has, within the last few years, undergone wonderful advancement; as a result, there have sprung up in all large communities many scholarly and scientific men known as "specialists", many of whom are doing good and satisfactory work. A "specialist" has lately been described as "one who knows more and more about less and less". This magic word "specialist", whether deserved or not, as a title, is in itself a great advertisement; while the simple title "doctor" now carries with it no distinguishing benefit to the general practitioner. We all know that the successful specialist has many advantages

over the general practitioner. He is independent of general practice. He has short hours and is seldom called out at night. His fees are always good—often fat. He can make known his terms, and fees, before attendance begins, and he usually gets them; and after a much easier life, his estate generally cuts up a great deal fatter after death than that of the general practitioner. Educated fingers now make a medical fortune or amass a pleasing competence. It is with one type of the general practitioner, who has been so frequently overlooked, that I wish to deal. Believing the "country doctor" to be the ideal general practitioner, I have selected him as the subject of this discourse.

As shining examples of the country doctor, several names at once present: Marion Sims, who did so much to develop the science of surgery in this country, was a country practitioner. He was regarded as the leading surgeon of his day. Ephraim McDowell, who did the first ovariectomy, far from the maddening crowds, in the backwoods. William Beaumont, our first great American physiologist, who while at a small army post in northern New York, performed experiments and recorded observations, under the most discouraging circumstances, which finally settled the chemical nature of the physiology of digestion. These men may be called the Nestors of Surgery and their works the Medical Pilgrim's Progress. Men of this type went into the outlying districts and grew with the settlement. Population was sparse and money scarce.

The country doctor today is a valuable man. He is the common ordinary garden variety of human, and half his ancestors were women. He stands at the first gate, and, taken as a unit, the country doctor is the keystone of the arch of medicine. In the outlying districts he is and always will be the local oracle. Day and night, year in and year out, he attends the sick. His doors swing wide open on the hinges of charity and love. He gives of his instinct, skill, intelligent service and sympathetic care, without question as to ability to pay, or creed or national origin of patient. His single purpose is to benefit humanity in the

spirit of fellowship and service. He cannot turn to the city laboratory expert for information regarding a pathologic condition that may baffle him. When a neighbor is ill, or has been felled by accident, it is his duty to return him to the ranks of the "up and doing". In the spirit of science, he mends a bruised or broken piece of humanity. His is no simulation of interest, but a genuine regard for the patient. He often has to break his way and road. No traffic laws suspend for him. The relief of human suffering, the dispelling of sorrow, are his contribution to the happiness of the community. His cheery words oftentimes relight the lamp of hope and do the timorous and despondent more good than medicine. His bold prompt acts, done with individuality, brain and backbone, with mental alertness and steadiness of nerve, often create a kind of confidence bordering on idolatry. He must be many sided, suave of manner, flexible of temper, and have ready knowledge of human nature and the happy genius of adapting himself to varying circumstances and to all kinds of people. He must possess the oil of kindness, untiring patience, and humanitarian spirit, a soothing voice, a tender touch and a sympathetic feeling to soften the pillow of affliction and smooth the couch of death. He must have an intimate knowledge of the human soul. It is not given to him to mount many marble steps, pull many silver door knobs and walk through dazzling halls into softly-shaded boudoirs over velvet carpets. He knows little of the pleasant obscurities of retirement, and he must be ready at all times to respond to the call of the suffering. He has no time to call his own. The darker the night, the worse the storm, the more likely he is to be aroused from his sleep to go to the chamber of suffering. He must bear all temperatures. Sweating in August suns and freezing in December storms, drowned with rain, and choked with dust, he must hurry here and run there, hungry at mid-day, or tired at midnight, while other people are oblivious to care and being refreshed by sleep, in all seasons he must be with his patients. In sorrow, in joy, in death or recovery, from the dawn of life to its sun-

set, while duty calls he can not flee but in dishonor. He must ignore himself. He cannot retire at 60, and the stress and strain on his heart strings last until his life ends. His battle is a personal every day fight. He must undertake no more than he can do personally and can expect no gains except from his own individual labors.

I am indebted to the Kansas Medical Journal for the following:

"If you can set a fractured femur with a piece of string and a flatiron and get as good results as the mechanical engineering staff of a city hospital at 10% of their fee;

If you can drive through 10 miles of mud to ease the little child of a dead beat;

If you can do a podalic version on the kitchen table of a farmhouse with husband holding legs and grandma giving chloroform;

If you can diagnose tonsilitis from diphtheria with a laboratory 48 hours away;

If you can pull the three-pronged fish-hook molar of the 250 pound hired man;

If you can maintain your equilibrium when the lordly specialist sneeringly refers to the general practitioner;

If you can change tires at 4 below at 4 a. m.;

If you can hold the chap with lumbago from taking back rubs for kidney trouble from the chiroprac;

Then, my boy, you are a Country Doctor."

If we turn to Ecclesiasticus, we read "Hon-

or the physician for the need thou hast of him: for the most High hath created him. For all healing is from God, and he shall receive gifts of the King. The skill of the physician shall lift up his head, and in the sight of great men he shall be praised. The most High hath created medicines out of the earth, and . . . hath given knowledge to men, that he may be honored in his wonders. By these he shall cure and shall allay their pains, and of these the apothecary shall make sweet confections, and shall make up ointments of health, and of his works there shall be no end. For the peace of God is over all the face of the earth."

Like the little red schoolhouse, we have come to the passing of a great American institution. The country doctor is a type of character which fades from view and there is none to fill his place. The country doctor, the father confessor of families, the steadfast friend, is a figure whom specialists are fast erasing; a fact which should give us some pause. He may not have been as devoted to the latest fads and fancies as the younger man, but he was the type which made all feel better when word was passed through the house that "The Doctor has come". We cannot but admire his devotion to high purposes and his fellows, nor can we fail to catch the contagion of his noble life. Let us then give credit where credit is due and render unto Caesar the things that are Caesar's.

"So here's to the Country Doctor,
Though humble, admired by us all,
For many times twixt life and death
He stands with his back to the wall."

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SOME IMPORTANT DECISIONS

The various efforts made by the "cults" to break into the field of legitimate medical practice have on a number of occasions given rise to some concern as to the possible rulings of state officials or possible court interpretations of existing laws. For instance, during the past year some sections of the state have been exercised over the eligibility of osteopaths to serve as school physicians. At a recent meeting of the Board of Trustees of our State Society it was announced that the State Board of Education has rendered a decision to the effect that osteopaths are held not competent for appointment as school medical examiners; a very logical decision and one that certainly tends to safeguard the health and lives of school children.

In this connection, your attention is directed to a communication from the State Board of Medical Examiners, published in the May Journal, pages 385-386, which embodies 2 of the most important court decisions ever recorded in relation to medical licensure. In the first, it is ruled by the New Jersey Supreme Court that a license to practice osteopathy does not entitle the licensee to employ electrotherapy. In the second decision, by the same court, a like opinion is filed as regards chiropractors. In the last mentioned case the evidence submitted to show that drugs had also been administered by the chiropractor was insufficient to prove decisive and the accused took refuge in that clause of the law which exempts "any person resident of the state who has been continuously engaged in giving treatment by electricity herein during the past 14

years, provided that said person has graduated from a legally incorporated electrotherapeutic school in good standing", but, the Court held that "there is no evidence that he *continuously* was engaged in giving treatments by electricity *in this state* during the past 14 years, and certainly none that he was such a graduate *as the statute described*".

These are highly important rulings and members would do well to read the decisions in full.

On top of this comes another very interesting development, according to the daily press. It is reported that the Supreme Court of this state has rendered a decision in the now famous Mecca College case to the effect that said college has no right to operate without a license, and the fine of \$500 imposed by the lower court for failure to procure such license is sustained.

For the college it was contended that the act violates its charter rights, that it constitutes an illegal regulation of a lawful business and that it imposes unreasonable and unnecessary restriction upon a private business.

The requirements of the act, said the court, are just and reasonable and they in no way prohibit the college from conducting its business in this state.

"It merely imposes certain conditions," said the court, "which the college, in the conduct of its school, must comply with. This the Legislature had a right to do and the act, therefore, does not offend against any constitutional provision."

"The mills of the Gods grind slow but they grind exceeding fine." Perhaps Mecca College will yet be crushed.

Medical Ethics

HUMAN INCENTIVES

John Hammond Bradshaw, M.D., F.A.C.S.
Orange, N. J.

Man is an animal that requires an incentive. He should start high and not be dominated by inferior aims. The transcendentalism of Emerson's stellar tractor expresses not only the soul of the poet but the mind of the philosopher. It teaches us that we can select our own motor *if we will*. It is absolutely necessary to aim high, for the attrition of recoil and the difficulty of accomplishment change the target.

One often wonders why the promise of early youth is not fulfilled more frequently in later years. Why do the waves of early hopes, ambitions and incentives wash us into stagnant water and sometimes broadcast us upon the rocks? Indolence, ill health, indifference, vacillation, misfortune, and *even great prosperity*, throw up barriers between us and our objective. He is strong only when he rises superior to such calamities. But the reward is sure and certain for him who *wills* and to him who *can*!

Of course the incentives driving the body are, from the very nature of the case, inferior to the urges of the spirit; this applies to what gratifies the animal nature so inseparable from our complex. But life is made up of both.

The incentive to do right should not depend alone upon the hope of reward. Do we regard the lure of a Mohammedan Heaven, a sensual Paradise, a high incentive for righteous acts? A Heaven in which one spends eternity reveling in the arms of black-eyed houris made a wonderful appeal! But what a monstrous expediency! Are not the incentives offered by Buddhism or Brahminism but little better? Again, to do right because, if you do, you will go to a Christian Heaven or if you sin you will go to an eternal Hell—even this does not give the highest incentive to right living. This is like telling your little boy that if he does not steal the cherries you will take him to the circus, and if he does steal them you will take him to the woodshed.

After all is said that can be said, there is no escaping the proposition that if frail human nature follows the teachings of Christ one comes as near to human perfection as poor weak humanity can come. This is more noteworthy when we know that to accomplish this result the world before Christ tried in vain for many centuries, many religions, the moral philosophy of many wise teachers, the guidance of many creeds, even the meditations of the whole earth's wisdom.

Human perfection is a dream. Benjamin Franklin, many sided, wiser than his generation, but no saint himself, studiously considered all the philosophers. Besides this he had himself the rather unusual habit of thinking. He condensed his creed into the simplest terms. Moreover he stated (and we make little mistake, if we remember): (1) Be industrious, if you would be rich! (2) Be studious, if you would be wise! (3) Be good, if you would be happy! Surely this expresses, in a terse happy combination, ways, means, incentive and objective.

Medical Economics

TEAM-WORK GETS RESULTS

(By D. K. M., Ohio State Med. Jour.,
January, 1928)

Critics who condemn and deride the tendency of Americans to "organize" have come in for a bit of their own medicine.

Merle Thorpe, editor of *The Nation's Business*, official publication of the U. S. Chamber of Commerce, has undertaken the task of chastising individuals under the caption of "Maverick or Throwback".

"A correspondent," he asserts, "writes somewhat petulantly that 'we are overorganized' and says that 'something should be done . . .'".

"As is often the case, we are apt to take for granted those virtues which are part and parcel of our daily lives. There are many who profit from the work of their organizations, yet who glibly disavow any interest in group endeavor. Their disinterest ranges from apathy to antipathy. They haven't time, or they make a contribution, or declare that they'll have nothing to do with an organization which is run by a clique.

"They are the unwitting economic 'throwbacks', freaks who have sloughed off generations of development and reverted to form. They become selfish members of a community, profession or trade, suspicious of each other, as it was in the beginning of things.

"Such men lose materially and spiritually. A New York banker said recently: 'The time is coming when a bank's committee will ask the applicant of a loan if he is a member of his group or trade association. In other words, is he going it alone, trying to meet this intensive age without the help of his partners in industry?'

"Set this down as gospel: The work of the world today is being done by groups. Certain wastes are group wastes and can be eliminated by a group program and group action. Ques-

tionable trade practices, once accepted in pioneering times, can be dealt with best by the groups involved. The new competition has pitted industry against industry, community against community.

The individual, no matter how strong as an individual, is weak without the strength of his group. And the beauty of American organizations is that individuality is stimulated, not suppressed.

Roosevelt declared truly that every man owes something to his trade or profession—not alone dole in the form of dues, but his best thought and inspiration. And Kipling, about the same time, viewing us and his own people with the eyes of a seer and prophet, remarked that the hope of the nation lay in "the everlasting teamwork of every bloomin' soul".

Mavericks in business are picturesque but abnormal. Biologists classify throwbacks as freaks. In this modern world with its complexities no man can stand alone.

Thoughts expressed by Mr. Thorpe are equally applicable to the medical profession. The complexities of modern activities, coupled with clashing interests, both selfish and altruistic, make group action inevitable, unescapable and of the utmost importance.

Possibly no group has more thoroughly appreciated this truism than the medical profession. Most county medical societies have nearly a century of splendid accomplishments behind them. The state and national societies are nearing the century mark in age. By this plan of organization, the medical profession has successfully translated group thought into group action, which has resulted in not only benefits and progress for the physician but the public as well.

Organization activities in Ohio during the past year have been extremely heavy. In addition to the inevitable routine work, medical organization, through the officers, committees and members of the county medical societies and the State Association, has experienced successfully a trying session of the legislature and born the brunt of defeating an organized attempt to destroy existing health safeguards, through the initiative, supplementary petition to establish a separate board of chiropractic examiners.

The program of activities for the New Year is filled with new and complex problems, each of which will require the best thought of the profession to arrive at an adequate solution. The active support and interest of every physician is of the utmost importance in carrying out this program.

Every physician can help materially by promptly paying his dues to the secretary-

treasurer of his local county medical society. By doing this, he is assured of continuous good standing, protection of his medical defense provisions and the receipt of his *Journal* without interruption. In addition, he is helping his officers and committees by expediting routine work. By the payment of dues alone, no physician discharges his obligations and duties to his colleagues. His most important duty lies in his active interest in the program and work of his society and his willingness to give his best efforts to aid in the common cause.

With each physician coöperating in this group action, the accomplishments for 1928 should exceed even those of the past year.

Esthetics

BOOKS

(From Kalends, Williams and Wilkins Co.)

Carlyle wisely cautions us to remember that "All mankind has done, thought, gained, or been, is lying, as in magic preservation, in the pages of books." Without them the triumphs of art, the wonders of science, the history of intellectual development, and the progress of mankind would have no trustworthy record.

Of all companions, tried and true, books are the best. Through them we are enabled to wander in many strange lands—to learn of the thoughts and customs, the hopes and fears, and the loves and sorrows of the peoples who inhabit them. The snows and chilling blasts of the Arctics, the fronded palms and hurricanes of the Tropics, the brooding mysticism of the Orient, and the stirring life of the Occident are at a moment's command.

Do the lives of great men and women interest you? Then turn to the biographies of those whom Fame has acclaimed as great. Read of their struggles, their anticipations and realizations, fight their battles, be thrilled with their victories, and live their lives.

Are you interested in your trade or profession? Regardless of what it may be there is a vast literature pertaining to it, from which can be garnered ideas which may prove to be of untold value to you. "I have not the time to read" is an admission that you are content to move along with the herd to the dead level of mediocrity, and that you do not possess ambition enough to desire to prove an exception.

How many books do you read and what kind? Upon the answers to these questions depends whether you are taking advantage of the work of the pioneers who have gone before, or whether you are playing "solitaire" in the great game of life.

Observations from the Lighthouse

THE MIDWIFE PROBLEM

(Continued from August Journal)

Comparison of Midwifery in This and Other Countries

In the Journal A. M. A. (89:2009, Dec. 10, 1927), Prof. George W. Kosmak presented an excellent article upon this question and made the very pertinent inquiry, "Can we draw a lesson, helpful to the United States, from European experiences?" The question is of such importance and Dr. Kosmak's discussion of it so fair and logical we consider it well to quote him at length.

"The midwife, as an established institution in obstetric practice, has been accepted abroad without question. The system of maternity care by properly educated and licensed midwives is, in fact, regarded as a state function, and the European medical profession has adjusted itself to fit into this scheme in varying degrees in different countries.

It is not so many decades ago that practically all confinements in the majority of European countries were actually attended by midwives, and it is only with the growth of maternity hospitals that any decided proportion of cases has been handled by physicians. In some countries, such as Germany, the midwife even among the better classes of the population has done the actual deliveries, with the physician acting merely in an advisory capacity and ready to intervene or assist when the occasion arises. In this country we have been more hesitant in accepting the European system of midwife care, although among our foreign-born population this is quite universal in many localities, and even among our native-born people, and especially in rural districts, the midwife, so called, still holds sway.

A journey through Scandinavia last summer with the American Gynecologic Club impressed me greatly with the good results obtained in a carefully supervised system of midwife instruction and practice. To begin with, the midwife in Scandinavia is not regarded as a pariah. Her ranks are recruited from the substantial middle classes of the population, mostly daughters of farmers, shopkeepers or minor government officials, who take up the study not solely with the desire to earn a livelihood, but because of their wish to educate themselves in this important function of womanhood, or to be part of a much respected system of social welfare activity. One sees therefore in the training schools for midwives bright, healthy looking, intelligent young women of the type from whom our best class of trained nurses would be recruited in this country, who are proud of being associated with an important community work and whose profession is recognized by medical men as an important factor in the art of obstetrics, with which they have no quarrel.

These women are thoroughly instructed in elementary obstetrics, more by practice and precept than by book learning. They are taught to revere the physician, and they are distinctly shown their limitations. Moreover, the one great and important factor in their training is the knowledge that pregnancy, labor and the puerperium are physiologic acts in a woman's life in the majority of cases, but that pathologic conditions may develop

in any one of their patients. With such pathologic conditions they must not concern themselves except in emergencies, and they are compelled by law to call in a physician for a transfer of responsibility in every case in which their clearly defined limitations are exceeded. As a result we find no attempt on the part of these women to cover up any sins of omission or commission. They fully realize that the fines or the abrogation of their license to practice are not only material losses but a shameful exposure of their shortcomings which would at once affect their standing in a community. An excellent system of supervision involves the reporting of their work to some central authority at regular intervals during each year. This is not a perfunctory report, but an actual record in diary form of every bit of work which they have done. In addition to this, midwives are compelled to take review courses of 2 weeks each, at stated intervals, in their original hospital if possible, and are retired from practice at 50.

In considering the instruction of midwives in Scandinavia, one is greatly impressed by the thoroughness of the teaching and the length of time given to such training as compared with what is required of our medical students in this country. True, the premedical preparation is perhaps not so complete, but here are women who have come into the most intimate contact with at least 80 cases of labor during each year of a two-year period as compared with the paltry 10 cases required by licensure for graduate physicians in many states. It would perhaps be better to omit the latter requirements entirely from the studies of our graduates who will not do obstetrics later on and require of the others a larger number of cases.

The Swedish scheme of midwife instruction is carried out largely in its leading institutions, situated in Stockholm and Gothenberg, which, in addition to their function as lying-in hospitals, maintain government schools for the teaching and training of midwives. When Professor Bovin, the director of the Lying-In Hospital of Stockholm, recently described the system to our group of visiting physicians, he prefaced his remark by the statement that he was aware that the word midwife did not sound well in the ears of American obstetricians, but he felt that the scheme of midwife instruction in Scandinavia was manifestly different from that in the United States and was developed to meet different conditions. The organization, education and supervision of the midwife in Sweden and Norway has been in vogue for more than 200 years, a period longer than that during which nurse training has been effective. It is worthy of note that the training of midwives has always been actively and actually participated in by the leaders of the European medical profession. Such schools are in part, or entirely, supported by governmental subsidies and are integral parts of large maternity hospitals. The curriculum is about the same in all Scandinavian schools. In Sweden, for example, at the present time there are resident in each of the 2 schools of midwifery about 60 pupils. The course of instruction lasts from 1 to 2 years and the candidates are essentially regarded as "maternity nurses" for normal pregnancy, labor and puerperium. As midwives must call in a physician when in doubt or in trouble, they are taught to recognize abnormalities.

Sweden has a widely scattered population of about 6,000,000 people, most of whom are in rural

districts, which makes it necessary for Swedish midwives to be capable of acting in emergencies when physicians cannot be reached. Those in charge of this training see no objection, therefore, to teaching such women how to perform certain obstetric operations, including manual removal of placenta, external, internal and combined version, extraction in breech presentation, and even the use of low forceps. Each student during her course has an opportunity to conduct about 80 deliveries under supervision. She is likewise trained on the manikin to perform various obstetric procedures. In addition, the course covers lessons in a pediatric clinic, where the pupil is impressed with the evils following artificial feeding. The midwives are moreover educated to give advice on the general hygiene of pregnancy and likewise on the health of the normal child in the first year of its life.

As a preliminary education, the present requirements prescribe in Sweden a complete course in the so-called primary schools, but within a year before beginning the course in midwifery, the student must have had a thorough review of the preliminary education. The authorities are not quite satisfied with this requirement, but thus far have been unable to obtain from the Swedish diet any change in the law because of the fear that an increase in the educational requirements will prevent that class of women from entering the schools who can stand best the hard life of a midwife practicing among the peasantry.

The results of this midwife training are evidently excellent because the mortality rates of these countries are remarkably low and likewise the morbidity following childbirth. In connection with these low rates, the fact must be taken into consideration that the Swedes and the other Scandinavian nations have remained a pure, sound Germanic race. For this reason, the proportion of abnormal confinements is quite small. For example, according to the statistics of the Stockholm Lying-In Hospital for the year 1925, among 3148 confinements there were 16 deaths—a rate of 0.51%, which includes sepsis from criminal abortions. During that year there were also 3 fatalities in 10 cases of placenta praevia. Twenty-one cases of eclampsia occurred without deaths. In Sweden and the other Scandinavian countries, contracted pelvis is a rarity and in the entire year only 1 instance of flat pelvis, for example, was noted at the Stockholm Lying-In Hospital, for which cesarean section was done. Spontaneous delivery seems to be the rule.

One cannot, of course, present a detailed study of the effect of midwife practice in Scandinavia. Attention must be drawn, however, to the remarkably low mortality rate of these countries in which midwife activities must have an important bearing. In Norway, the average puerperal death rate from 1900 to 1918 per thousand live births was 2.95, with midwives participating in about 85% of the cases. Sweden has an average rate of 2.45 with about the same midwife participation.

It has been assumed, whether justly or otherwise, that the maternal morbidity and mortality statistics associated with childbearing in the United States are on a very low plane, and we have been accused in various quarters of presenting a picture in this respect which is not in accord with our otherwise high standards of civilization. I repeat the qualification "justly or not" because the comparison made between our records and those of foreign countries is perhaps not

based on equal standards. Undoubtedly our maternal mortality statistics could be improved, but in this connection one should bear in mind that possibly there are factors influencing these figures which are not prevalent in those countries with which the United States is compared. It cannot be denied, however, that this country is credited with a puerperal mortality rate entirely too high. Inquiry shows that this rate is pretty evenly distributed, and that hospital confinements are perhaps as culpable as those conducted in the homes; for, with the increase in hospital cases, we have not apparently been favored with any great improvement in such causes as the septic rate.

Admitting the differences in the underlying factors of obstetric practice in Scandinavia and the United States, can these be accepted as the sole cause of the discrepancies in point of maternal morbidity and mortality which seem to distinguish the vital statistics of the two nations? In one instance, as already noted, there is a homogeneous racial stock, sound in most respects, especially as regards the admittedly low incidence of pelvic deformities—a people otherwise physically well developed to favor natural labor. Yet there is much tuberculosis, anemia, syphilis and other diseases, and hospital reports list many of the complications of pregnancy which prevail in our own statistics. But there are not as many cases of sepsis; there is a less number of operative deliveries, and apparently less "meddlesome midwifery." For example, in a service of 3148 cases during 1925 at the Stockholm Lying-In Hospital, there were only 109 forceps cases, 15 versions and 2 cesarean sections, 1 for flat pelvis and 1 for placenta praevia, or about 4% of operative deliveries; and this applies to the entire country. In addition, out of 471 cases of abortion, operations were performed in only 91, the others ending spontaneously. About the same incidence was found to apply in Norway, as shown in figures obtainable for 1917-1918.

How many hospitals in this country can point to an equally low operative incidence? There are no comprehensive figures for the country, much as they are needed. All that can be done is to refer to certain isolated hospital statistics and occasional state records. In Massachusetts, for example, in 1922, there were 1161 cesarean sections in 90,904 births, or 13 in every thousand. In a series of 100 cesarean cases carefully studied which terminated fatally, 25 were in toxemias and 37 in dystocia. The general operative incidence in our hospitals has been shown to vary from 10 to 30%, as compared with an average of 4% in the several Scandinavian countries.

We have shown in our own country what advanced prenatal care will do to reduce the mortality from toxemia, from endocarditis and from other preventable complications of pregnancy, but we have not sufficiently reduced the occurrence of sepsis and deaths from operative deliveries. Of what use is all the prenatal care if the mother succumbs to a fatal septicemia or to shock from hemorrhage? In several of the Scandinavian hospitals, I was frankly told of the envy with which their directors regard our splendidly organized prenatal work, which it is their ambition to emulate. They feel convinced that this would result in an even greater reduction in their mortality rates attending childbearing.

What can we do to bring our mortality figures associated with pregnancy to the level of some of these favored nations? Admittedly our fault

is largely centered in the high septic rate, for the other complications of pregnancy show constantly improved figures. In 1921, in the U. S. registration area, two-fifths of all the deaths were due to septicemia; 6057 out of 15,027, or 40.3%. But where does the high septic rate come from? This would be of interest to determine, and it seems to me that no better suggestion could be made than that this section of the American Medical Association, through its membership in the Joint Committee on Maternal Welfare, inaugurate and participate in a careful inquiry to determine if possible why pregnancy and labor are attended with such large risks in this country. And even in the United States the midwife has been credited with better results so far as sepsis is concerned than has the physician. This comparison, whether justified or not, is featured in much of the propaganda for so-called better obstetric care, and made a basis for condemning the physician. But should this be made an argument for the development and elevation of a midwife system to the position which this occupies in Scandinavia and other European countries? I would hesitate to recommend this without reservations, but somewhere and somehow a solution must be found. I believe that it lies in the domain of the medical profession to do this by means and methods which have already been detailed by others who have spoken and written on this topic. The development of a better system of obstetric care should not be left to lay bodies or governmental agencies, and the invasion of a purely medical field by such agencies can be ascribed only to an attitude of *laissez faire* on the part of the physician. Interest in better obstetric care should be a matter of community development; of better teaching of obstetrics to students, especially on the clinical side, and of readily available postgraduate instruction for the progressive physician in order that he may retain his interest in this important branch of medical practice. This will soon react in a desire for better attention in pregnancy on the part of the public, with a corresponding elevation in the dignity of the obstetric attendant.

Whether a midwife system in this country shall be a part of this scheme is for the profession to decide. A comparatively small number of states have presented data concerning the practice of midwifery, but the majority are ignorant of the number as well as the qualifications of midwives working within their boundaries. When this negligence is compared with the carefully supervised and studied system in Scandinavian countries to which I have referred, the necessity for reform becomes at once evident, if we are to retain this type of medical practice.

That it still constitutes a formidable element is evident from the report for 1924, for example, of the Bureau of Child Hygiene of the New York Health Department. In this the total number of registered midwives given is 1309, who reported 25,833, or 19.8%, of all of the births. This was a decrease of 1.5% over the previous year. It is asserted in this report that no cases of puerperal sepsis developed among these patients, but there were 6 instances of ophthalmia neonatorum. Similar figures are obtainable from other centers, but little definite information is at hand for large sections of the United States. Ignoring the midwife, as is done in certain states, simply results in what might be denominated "boot-legging"; the half-hearted and incomplete teaching of midwives in another state is unsatisfactory

and insufficient. If, as is claimed, the midwife is absolutely essential in certain rural districts and among the foreign born of our large cities, then some steps must be taken to provide for her proper education and subsequent control and supervision. The rules that now govern her activities in various states insist, among other things, that she shall have certain qualifications, which, as far as I can learn from inquiry, can be secured, with one exception, only outside this country. If midwife attendance is an objectionable form of medical practice, the profession must gird its loins and find a substitute, or continue to be saddled with the odium of unjustified figures in child-bearing which are not in accord with the achievements in other fields of American medical practice."

Lay Mirror Reflections

A CONGRESSMAN PROPOSES SOME ETHICS FOR ALIENISTS

(Newark News, March 13, 1928)

Loyalty is perhaps the noblest of all human qualities, but even zeal for one's employer, it has been asserted, may under certain circumstances be carried to unwarranted lengths. There is, to be more definite, the business of alienists whose testimony has served to string out and complicate many a noted, not to say notorious, trial of recent years. A demand has now been made in Congress for the framing of a code of ethics governing the testimony of alienists figuring as experts in court cases, and a weary public, at least, will wish appropriate legislation a safe and speedy passage.

Too familiar are the trials, especially criminal ones, characterized by opposing forces of alienists, one bent on proving that apparently simple actions or circumstances indicate one thing, the other that they signify something else. Consequently, there is a growing idea that the relation between justice and a battle of smart experts exchanging mystifying technical terms is not very close. It may not be possible to employ alienists to prove anything the employer wishes to have proved, but the public cannot be blamed for getting a certain impression through reading the testimony in some famous case.

Congressman Black of New York, who made the demand in the House, will have many well-wishers in his effort to hang up some ethics for those alienists who need something of the kind.

FOOLS AND THEIR MONEY

(Atlantic City Press, June 25, 1928)

There are sun baths, sand baths, salt-water baths and the Saturday night bath. Also, according to the latest addition to the Boardwalk *hoi-polloi*, there are internal baths, "guaranteed" to ward off mumps, cure angina pectoris, and the fidgets, and bring relief to sufferers from anything listed in *materia medica*.

The subject is as old as, perhaps older than, the hot-water bottle and red flannel underwear, yet its modern exploiters, who seem to have fallen heir to the once flourishing snake-oil medicine show, continue to reap a golden harvest by proclaiming its cure-all qualities. Common de-

gency and specific police regulations prohibit more pertinent demonstrations, and so a little simple arithmetic upon a blackboard and a few strongarm feats serve to proclaim the truth of their assertions, or, possibly, to attract a crowd. Singularly enough, the method is useless, devoid of merit and a waste of time unless that particular device is purchased which this particular barker happens to have on hand.

Enough. What we started out to say is that it is as easy to fool a modern Boardwalk crowd out of its money, as it is in that center of intellectualism and sophistication—Broadway.

Communications

ANNUAL REPORT OF THE BOARD OF TRUSTEES

Society for the Relief of Widows and Orphans of Medical Men of New Jersey

(Reported by Dr. Charles D. Bennett,
Vice-President)

Newark, N. J., May 1, 1928.

Forty-sixth Annual Report

In the year just completed, nothing unusual or of serious moment to the Society has transpired.

It is, however, a matter of gratification that we are steadily growing; 32 new members were elected and as only 1 dropped for non-payment of assessments and 2 resigned, we can record a present membership of 523.

Nine members died, Doctors E. L. Bull, T. R. Chambers, C. M. Dunning, C. R. P. Fisher, J. J. Haring, A. M. Keim, E. M. Lyon, A. B. Russell and S. A. Twinch. Of these it should be noted that Dr. Lyon was a former member of the Board of Trustees, serving the Society faithfully for several years. He had, some time ago, retired from active practice and was living quietly in Jamaica, Long Island, where he passed away. Also Dr. J. J. Haring had the distinction of being our oldest member, having reached the ripe old age of 93, still in full possession of all his faculties. A former resident of Englewood, he removed several years ago to Perrysburg, Ohio, to spend his remaining years with his daughter and although so far away from his old associations, he kept up his interest with them and was always a loyal member and a warm friend of our Society.

We are now paying, for death benefit, a little over \$400, and at the December meeting \$550 was distributed to beneficiaries, who were deemed to be in need of assistance.

Your Custodians have continued their careful supervision of the Society's invested funds and have finally sold all of our Liberty Bonds, netting thereby a considerable profit, and have invested the proceeds in guaranteed 5½% first mortgages. Our Permanent Fund now amounts to \$40,719.86 and our income therefrom for the past year was \$1959.55.

Just here a word of caution seems applicable. To many of our members, this amount seems very large and they question the wisdom of accumulating such a sum, or of increasing it. Really, however, when the size of the Society is properly considered the amount is trivial, in its ability to

extend aid to our beneficiaries. If the fund was distributed equally to our living members, each one would receive about \$77. But it must be remembered that there are at least 250 widows and orphans who have residuary rights to this money. Adding these to our members would allow, by a cash distribution, only about \$52 for each. But again, we must never forget that this Fund was not established for the purpose of aiding our living members. It belongs absolutely to the heirs of our members and any diversion of these moneys from such purpose would be a very serious breach of trust.

All that we can give in the way of death claims is 75% of the amount collected from the last assessment and if it is desired to increase this amount some other plan must be devised, but always without impairing the Fund or diminishing the percentage which should make for its normal increase. It is possible that some such plan may be arranged. Your Board is carefully considering the matter and it may be that by an additional voluntary contribution from members or friends, another and distinct Fund might be created from which moneys might be granted to living members who are in actual need.

Your Board trusts that the Society at large will appreciate their endeavor to act wisely in this matter and begs, in the meantime that no attack shall be made upon the Fund or its legal disposition.

Surely, with such a problem, the old saying, "Make haste slowly" applies with great force.

ARCHIVES JEFFERSON MEDICAL COLLEGE

(Letter from E. J. G. Beardsley, M. D.,
Philadelphia)

The Committee on Archives of the Jefferson Medical College and Hospital will appreciate gifts of, or information concerning, paintings, etchings, drawings, silhouettes, busts, photographs or cartoons of physicians who have served upon the Staff of either College or Hospital. Etchings, wood cuts, photographs or similar souvenirs of College or Hospital buildings of the past welcomed. All gifts or information concerning them may be addressed to The Committee on Archives, care The Chief Resident Physician, Jefferson Medical College Hospital, Philadelphia.

In Lighter Vein

An order has gone out from Washington not to shoot bootleggers. This is a Presidential year, and even a bootlegger has a vote.—Milwaukee Journal.

She's Getting Her Neck Shaved

What became of the old-fashioned mother, who told her daughter it was not nice to look in a barbershop as she passed?—Buffalo Evening News.

Retort Courteous

Mistress (angrily)—I never heard such impudence in all my life. You had a lot of nerve to call yourself a lady's maid.

New Maid—I don't call myself that now, ma'am; but I was a lady's maid before I got this job.

Current Events

ABSTRACT OF PROCEEDINGS OF HOUSE OF DELEGATES AT MINNEAPOLIS SESSION

The total membership of the House of Delegates is 170. At the final session in Minneapolis 154 delegates answered to the roll call.

All constituent state medical associations were represented except those of Florida, Nevada, Alaska and Hawaii. All sections of the Scientific Assembly were represented by delegates except the Sections on Pharmacology and Therapeutics; Nervous and Mental Diseases; Dermatology and Syphilology, and Preventive and Industrial Medicine and Public Health.

In the address of the Speaker, Dr. F. C. Warnshuis, it was suggested that the annual speaker's address to the House of Delegates should contain no general recommendations concerning policies of the Association but that it should deal with the affairs and procedures of the House of Delegates. The Speaker urged that careful consideration should be given, and thorough review of matters submitted should be made, by reference committees, and that there should be no generalized approval of referred reports and resolutions.

The President, Dr. Jabez N. Jackson, reviewed vital changes affecting the practice of medicine, referring especially to the development of specialization and institutional care and to the exploitation of the physician in the abuse of medical charity. He offered a recommendation to the effect that there should be an investigation and classification of medical charities, either through a special committee of the Association or through the Judicial Council.

The President-Elect, Dr. William Sydney Thayer, delivered a brief address in which he called attention to the present tendency toward overorganization of the profession. Dr. Thayer paid tribute to the work of Dr. Hideyo Noguchi, lately deceased.

Official Delegates

The British Medical Association; the Canadian Medical Association; the Victorian Branch of the British Medical Association in Australia, and the Medical Society of Costa Rica were officially represented by Sir G. Lenthal Cheatele, of London; Dr. J. Harvey Smith, of Winnipeg; Dr. R. G. McPhee, of Australia, and Dr. A. Pena Chavarria, of Costa Rica, as fraternal delegates, who presented greetings from their respective societies.

Action on Report of Council on Scientific Assembly

The Reference Committee on Sections and Section Work commended the report of the Council on Scientific Assembly; recommended approval of the program of diagnostic clinics and clinical lectures which preceded the regular section programs, and approved the recommendation of the Council that all questions of a scientific nature arising in the House of Delegates or in the scientific sections should be referred to the Council on Scientific Assembly for investigation and report before being considered by the House of Delegates.

The recommendations of the Reference Committee were adopted by the House.

Medical Education and Hospitals

The report of the Council on Medical Education and Hospitals indicated that the Council plans to devote considerable attention for the next several

years to a survey of hospitals in the United States. The Chairman of the Council, in presenting the report, indicated that the difficulties of appraisal are recognized and are being considered by the Council. The report also dealt in some detail with the appraisal of clinical laboratories.

The Reference Committee called attention to the fact that the appraisal of medical institutions and agencies in so extensive and so populous a country as this is a vast undertaking and urged that the policy of the Council should be carried out with great caution and in cooperation with constituent state medical associations and state authorities.

The Reference Committee strongly endorsed the recommendation of the Chairman of the Council on Medical Education and Hospitals urging that the practice of medicine is not the proper function of corporations and that the American Medical Association should use its utmost endeavors to stop this growing abuse. The Committee endorsed the substance of a resolution offered by Dr. Southgate Leigh of Virginia to the effect,

(1) That it would be desirable that medical students should graduate and enter practice at an earlier age than at present;

(2) That the plan of covering the medical course in 3 years of 4 quarters instead of in 4 years of 3 quarters, or any other adequate plan for reducing the length of the medical course, is greatly to be desired;

(3) That the medical course is overcrowded with details and detailed consideration of specialists and would be improved by less crowding with a course confined more nearly to the essentials, and that efforts to this end should be made.

A resolution presented by Dr. John O. Polak, of the Section on Obstetrics, Gynecology and Abdominal Surgery provided that the House of Delegates should disapprove of any reduction in the hours allotted to the teaching of obstetrics and should advocate that obstetrics as a major subject be allotted a number of hours equal to those allotted to surgery. In reporting on this resolution, the Reference Committee on Medical Education made the point that the importance of a subject or the amount of work that it constitutes for the general practitioner alone is not a proper measure of the time which should be allotted to the study of that subject. The Committee also felt that definite instructions of the kind contemplated in the resolution to councils and other bodies engaged in working out difficult problems are inadvisable and that freedom and initiative should not be hampered by rigid instruction. The importance of thorough instruction in obstetrics was recognized by the Committee, but its recommendation was that the resolution of Dr. Polak be not adopted.

The report of the Reference Committee on Medical Education was adopted by the House of Delegates.

Hygiene and Public Health

The Reference Committee on Hygiene and Public Health recommended that the House of Delegates reaffirm its endorsement of the plans outlined at a previous session for medical relief in disaster.

With respect to a communication addressed to the House of Delegates by the National Grange concerning the alleged scarcity of physicians in the rural districts, the Reference Committee offered the following resolution, which was adopted by the House of Delegates:

Resolved. That an official reply to the Grange be formulated by the Secretary of the House of Delegates embodying the following thoughts:

(1) That the House of Delegates is keenly alive to the problems involved and recognizes that, although there will always be some inadequacy of medical services in sparsely settled communities, improvement of medical services in rural districts is needed.

(2) That the problem is being intensively studied by the Commission on Medical Education (already in its fourth year), the Committee on the Cost of Medical Care, the Council on Medical Education and Hospitals, and other bodies.

(3) That the problem is fundamentally economic and the solution involves much more than the mere length and costs of medical education.

(4) That patience and time are necessary in order to obtain data and evolve methods for solving this problem.

(5) That suggestions from the National Grange and information will be welcomed by the House of Delegates and by any of the bodies specially engaged in the study of medical educational and economic problems.

The Committee recommended approval of legislation providing for coördination and increased efficiency of the public health activities of the federal government.

The report of the Reference Committee on Hygiene and Public Health was approved.

Legislation and Public Relations

The following resolution, introduced by Dr. C. J. Whalen of Illinois, was referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, It has come to our attention that students in universities and colleges are being given free medical care without regard to the ability of the individual to pay for the same, therefore be it

Resolved. That the Judicial Council be requested to investigate the matter as to the extent to which this practice prevails.

The Reference Committee recommended that this resolution be referred to the Judicial Council.

A resolution providing that the Board of Trustees of the Association take leadership in the support of suitable legislation to recognize properly the services of Dr. Jesse W. Lazear and Dr. James Carroll was, on recommendation of the Reference Committee, referred to the Board of Trustees.

The recommendation of the Reference Committee with respect to the report of the committee appointed to secure revision of undesirable regulations under the Volstead Act was to the effect that this committee be continued for one year.

The Committee approved the resolution introduced by Dr. Orrin Sage Wightman, of New York, providing for the appointment by the Board of Trustees of a Committee on Visual Moving Picture Education.

The recommendations of the Reference Committee on Legislation and Public Relations were adopted by the House of Delegates.

Amendments to Constitution and By-Laws

The Reference Committee on Amendments to the Constitution and By-Laws recommended that the proposed amendment to Section 1, Article 5 of the Constitution, offered by Dr. George Edward Fol-

lansbee of Ohio, be made instead an amendment to the By-Laws to be Section 12, Chapter XI, to read as follows:

The House of Delegates shall have the power to expel a member of the American Medical Association or a Fellow of the Scientific Assembly on recommendation of the Judicial Council.

The Committee offered the following substitute for an amendment to Article 12 of the Constitution offered by Dr. J. C. Litzenberg of Minnesota:

The House of Delegates may amend this Constitution at any annual session, provided the proposed amendment shall have been introduced at the preceding annual session, and provided two-thirds of the voting members of the House of Delegates registered at the session at which action is taken vote in favor of such change or amendment.

The Reference Committee recommended that a change in the By-Laws proposed by Dr. J. C. Litzenberg of Minnesota should be changed so that Section 5, Chapter II of the By-Laws shall read:

SECTION 5.—*Quorum.*—Fifty of the voting members of the House of Delegates shall constitute a quorum.

The Committee recommended that a proposed amendment providing that decisions of the Judicial Council should be subject to review by the House of Delegates be rejected.

A proposed amendment to the By-Laws providing for the establishment, maintenance, custodianship and disbursement of special funds by sections of the Scientific Assembly was tabled.

The Reference Committee's recommendation concerning an amendment to the By-Laws, proposed by Dr. Southgate Leigh, to insure representation for constituent associations at the sessions of the House of Delegates, was that Dr. Leigh should present the matter in more specific form at the next annual session of the House of Delegates.

The recommendations of the Reference Committee on Amendments to the Constitution and By-Laws were adopted by the House of Delegates, except the recommendation concerning the proposed amendment providing for the establishment and disbursement of special funds by sections of the Scientific Assembly which was laid on the table.

Report of Officers

The Reference Committee on Reports of Officers endorsed the opinion expressed by the Speaker of the House that the Speaker's address should be confined to recommendations concerning the conduct and administration of the business of the House of Delegates.

The Committee did not approve the suggestion offered by the Speaker that the details of the work of the House of Delegates should be published in full, but did approve the suggestion of the Speaker that endorsements of recommendations and reports should be made by the reference committees only after thorough review and consideration of all matters referred.

The Reference Committee offered its approval of the declaration of the President that "the time has come when no institution or clinic should permit its attending physicians to be imposed on; and when, whatever the social or other advantage to the physician in the clinic, he should not be per-

mitted to contribute to what is a gross injustice to the profession as a whole."

The Committee also approved the principle of the President's recommendation for the investigation and classification of medical charities through the Judicial Council.

The Reference Committee especially approved of the suggestions of the President-Elect that in the multiplicity of independent medical societies there exists a danger of diverting and dissipating the fundamental strength of organized medicine "as typified in the composition of our county, state and national organizations."

The recommendations of the Reference Committee on Reports of Officers were adopted by the House of Delegates.

Reports of Board of Trustees and Secretary

The Reference Committee on the Reports of the Board of Trustees and Secretary endorsed that part of the Secretary's report relative to the multiplicity of existing independent medical organizations whose work, in many instances, parallels the work of the component county and constituent state medical associations and, to some extent, tends to interfere with the successful operation of component county medical societies and constituent state medical associations of the American Medical Association.

Concerning the meetings of hospital staffs, the Committee offered the following statement:

The committee deprecates especially the compulsory multiple scientific meetings of hospital staff organizations. These have tended to limit to small groups the dissemination of medical information and the discussion of medical problems, interfering thereby with the work of organized medical societies. Organization is necessary in order to obtain unified action of the medical profession in various communities. We feel that the need is greater than ever for general discussion of medical problems and for the dissemination of information associated with the specialties to all physicians. Only in this way can the general practitioner keep abreast of modern medicine.

Your reference committee suggests that the staff meetings of hospitals be devoted preferably to executive discussions of problems relating to hospital economics and records, and that members of the American Medical Association make special efforts to stimulate interest in, and the development of, scientific medicine in the regularly organized county medical societies.

This part of the Committee's report evoked extensive discussion but was adopted by the House as presented by the Committee.

The recommendations offered by the Secretary concerning relief for needy physicians, which recommendations were submitted in compliance with specific instructions received from the House of Delegates, were approved by the Reference Committee with the recommendation that each constituent state medical association should be left to follow its own plan for the relief of needy physicians. After considerable discussion, this matter was referred back to the Reference Committee.

Later on in the session, the Committee reported on a resolution presented by Dr. J. Richard Kevin, of New York, providing that a committee of the House of Delegates cause to have made surveys through county medical societies to gather additional information concerning the need for the establishment and maintenance of a national home

for incapacitated and indigent physicians. The recommendation of the Reference Committee was that the Board of Trustees should appoint a commission of 5 to consider the whole situation, including the various solutions that have been proposed, and to determine the responsibility of the American Medical Association.

The Reference Committee expressed appreciation for the work accomplished by the Board of Trustees. It commended the Quarterly Cumulative Index Medicus and strongly urged that the members and Fellows of the Association should give adequate support to this publication. The activities of the Coöperative Medical Advertising Bureau were endorsed by the Committee and expression was given to the hope that the few state journals which do not participate in the work of this Bureau will eliminate the advertising of products which do not have the approval of the Council on Pharmacy and Chemistry.

The report of the Reference Committee stressed the importance of the periodic examination; commended the work of the Council on Pharmacy and Chemistry, and made an urgent appeal for the support of this Council by the profession at large; approved the work of the Council on Physical Therapy, especially in providing for the dissemination of information concerning the methods of physical therapy among the profession, and commented most favorably on the work of the Bureau of Investigation.

Efforts of the Bureau of Legal Medicine and Legislation toward preventing the extension of socialized medical practice by the government through the Veterans' Bureau and similar organizations were endorsed by the Committee, and the intention of this Bureau to continue its work for legislation, giving physicians the right to deduct from income tax returns expenses incurred in attending scientific meetings and in taking graduate courses of instruction, were approved by the Committee. The activities of the Bureau with respect to the status of the physician as an expert witness were also approved.

The report of the Advisory Committee on Trachoma Among the Indians was endorsed by the Reference Committee, and the continuance of this Committee was recommended.

It was urged by the Reference Committee that members of the House of Delegates should take advantage of every opportunity to keep the component societies of the state associations they represent advised about the work of the American Medical Association.

The Reference Committee expressed appreciation of the report of the Committee on the Grading of Nursing Schools, and recommended that the request for additional appropriations for the use of this committee be referred to the Board of Trustees.

The action of the Board of Trustees advising the rejection of the offer of the Physicians' Home, Inc., to the effect that this home be taken over by the Association was endorsed by the Reference Committee.

The Reference Committee expressed interest in the growth and work of the Woman's Auxiliary, and endorsed the continuance of the annual conferences on public health. The continued extension of the activities of the Association were favorably commented on in the report of the Reference Committee, and the plans of the Board of Trustees for providing increased facilities were approved.

The recommendations of the Committee were adopted by the House.

Reapportionment of Delegates

On recommendation of the Reference Committee on Reapportionment of Delegates, 775 was established as the basic figure for determining representation of state associations. Thus, each constituent state medical association will have one delegate for each 775 members. Each association with a membership of less than 775 will be represented by one delegate. On this basis, the total membership of the House of Delegates will be 173. California, Florida, New Jersey, New York and Pennsylvania will each gain one delegate, under the new apportionment, while Iowa and Texas will each lose one delegate.

Committee on Visual Moving Picture Education

A resolution introduced by Dr. Orrin Sage Wightman of New York provided for the appointment of a committee on visual moving picture education whose duties shall be to deal with the problem of using moving pictures for educational purposes. This resolution was adopted.

Election of Officers

The following officers were elected:

President-Elect, Dr. M. L. Harris, Chicago; Vice-President, Dr. W. A. Jones, Minneapolis; Secretary, Dr. Olin West, Chicago; Treasurer, Dr. Austin A. Hayden, Chicago; Speaker of the House of Delegates, Dr. F. C. Warnshuis, Grand Rapids, Mich.; Vice-Speaker, Dr. Allen H. Bunce, Atlanta, Ga.; members of the Board of Trustees, Dr. J. H. Walsh, Chicago, and Dr. A. R. Mitchell, Lincoln, Neb.; members of the Judicial Council, Dr. F. W. Cregor, Indianapolis, and Dr. James B. Herrick, Chicago; member of the Council on Scientific Assembly, Dr. Roger S. Morris, Cincinnati; member of the Council on Medical Education and Hospitals, Dr. Reginald Fitz, Boston.

Portland, Ore., was chosen as the place of meeting for the annual session in 1929.

The total registration at the Minneapolis Session was 4876.

THE AMERICAN COLLEGE OF SURGEONS EIGHTEENTH CLINICAL CONGRESS

The American College of Surgeons will hold the Eighteenth Clinical Congress in Boston, October 8-12. Headquarters will be at the Statler Hotel and meetings will be held in the ballroom of the Copley-Plaza Hotel and Symphony Hall. The Hospital Standardization Conference will be held in morning and afternoon sessions in the ballroom of the Copley-Plaza Hotel, Monday, Tuesday, Wednesday and Thursday. An innovation this year will be the commencement of the clinics in the Boston hospitals on Monday afternoon, continuing through the mornings and afternoons of the following 4 days. Monday evening's program will include an address of welcome by the local Chairman, the address of the retiring President, Dr. George David Stewart, New York, the inaugural address of the new President, Dr. Franklin H. Martin, Chicago; and the John B. Murphy oration on surgery by Professor Vittorio Putti, of Bologna, Italy. Tuesday, Wednesday and Thursday evenings' sessions will be held in the ballroom of the Copley-Plaza Hotel. At the Wednesday evening meeting the visiting surgeons will be the guests of the Boston Surgical Society at a special meeting when the

Bigelow medal is to be awarded. On Friday evening the Annual Convocation of the College will be held in Symphony Hall when the 1928 class of candidates for Fellowship in the College will be received. The fellowship address on this evening will be delivered by Dr. William J. Mayo. The annual meeting of the Governors and Fellows will be held Friday afternoon and will be followed by a symposium on Traumatic Surgery to be participated in by leaders in industry, labor, indemnity organizations and the medical profession. Ether Day will be celebrated in the Dome Room of the Massachusetts General Hospital on Friday when a bronze bust of William T. A. Morton will be presented to the hospital. It was in this building that ether was first administered for the production of surgical anesthesia on October 16, 1846. Several newly completed medical motion pictures produced under the supervision of the American College of Surgeons and approved by it will be shown during the Congress. Reduced fares on the railways of the United States and Canada have been authorized to those holding a convention certificate so that the total fare for the round trip will be one and one-half the ordinary first class one-way fare. Other outstanding features will be the exhibits. In addition to the commercial exhibits the departments of the College will present scientific exhibits. A number of distinguished foreign guests of international reputation have signified their intention of attending. The Chairman of the Boston Committee on Arrangements is Dr. Frederic J. Cotton.

Medical Book Reviews

Department Director, Royce Paddock, M. D.

TOBACCO AND PHYSICAL EFFICIENCY, a digest of Clinical Data (with annotated bibliography), by P. Schrupf-Pieffron, M. D. P. H. Hoeber, Inc., New York, 1927. Price \$1.85.

This small volume is published under the auspices of The Committee to Study the Tobacco Problem. It contains 55 pages of text and 70 pages of bibliography. The text is merely a brief review of some of the literature and more important expressions of opinion on the various phases of tobacco: its chemical constituents, and pharmacologic action, together with its effects—some proved, some supposed—on various organs of the body.

Of these the nervous and circulatory systems give the greatest number of symptoms. Considering the latter, the arrhythmias (extrasystole) and "false angina" symptoms are thought to be established, while definite structural vascular lesions are evidently not proved. Tobacco, however, is to be avoided in all organic cardiovascular lesions, since it affects function unfavorably. This conclusion seems to reflect the doctor's viewpoint quite accurately, and without compromise. It leaves little room for the surmise as to what the doctor does when he is the patient in question. In such a case he holds with tradition by avoiding, not tobacco, but his own very sensible advice. Under nervous symptoms a list, including headache, giddiness, insomnia, aphasia, amblyopia, myosis, tinnitus, neuralgia, and deafness from catarrh of the middle ear, provides an alarming

indictment worthy of Dr. Rabelais were it not directed toward one of the creature comforts, the gentle weed. This the worthy doctor would have heartily recommended in the largest amounts, had he not antedated Sir Walter and the Virginian blessing by leaving this life when that worthy was one year old, and hence too young to have found or appreciated tobacco.

The small book coldly says, "The problem is the same with tobacco as with alcohol. A sound individual may bear what is for him moderate doses without injury, but even these are noxious to the unsound or other sound individuals. But the immoderate use of tobacco brings on a series of disturbances which are first functional, then organic, and of which some are not without gravity."

If it is borne in mind that the book is an attempt to focus briefly the little we know on the subject of tobacco, its lack of continuity and completeness must be understood. In regard to the use of tobacco, then, its word is not final.

The Woman's Auxiliary

We take pleasure in reproducing, for the edification of members of our own newly organized auxiliary, the following letter from Mrs. Southgate Leigh, of Norfolk, to the women of Virginia, and published in the Virginia Medical Monthly, April, 1928. One of her suggestions, that each State Medical Society should provide for a special committee to serve as an Advisory Council to its Woman's Auxiliary, was adopted at the recent meeting of the Medical Society of New Jersey, and the following committee was appointed by the Trustees: Walt P. Conaway, Atlantic City, Chairman; Paul M. Mezey, Camden; Lucius F. Donohoe, Bayonne; Linn Emerson, Orange, and Louis C. Osmun, Hackettstown.

An Appeal for Virginia

This year's president of the Woman's Auxiliary to the American Medical Association, Mrs. John Oliver McReynolds, of Dallas, Texas, The Mother of the Organization, has given to the Auxiliary, during her term of administration, new inspiration and a wonderfully increased zeal for service.

She has also brought to the aid of the Auxiliary and has been able to obtain the interest of some of the greatest men in the medical profession, as well as their wives, who have become staunch friends of the organization and are most enthusiastic workers in the "quest for better health for all the people".

These women have come into the Auxiliary with the determination to impress upon the public a proper conception of the real mission of organized medicine and to tell its true story to the people.

We hear doctors who do not understand our work say, "This is just another Woman's Club, formed for entertaining, etc.;" and it was also said that the Auxiliary was formed to create a better friendship among the doctors' families. But one is forced to realize that the Auxiliary was organized for something greater and more far-reaching than mere entertainment. It has succeeded in stamping its name upon the pages of history. Already some other nations are thinking of organizing in their own countries.

Medical Science has made wonderful strides

in knowledge and discoveries, all of which have been offered freely to the world as a contribution from the medical profession. The United States may truly be called "Leader of the World" in organization and methods of Preventive Medicine.

But what good is all this unless it is made plain to our people?

During the last few years many of the leaders of medical science have given serious consideration to the subject of public health education. These men have become alive to the fact that physicians only are qualified, by heritage, by education and by experience, to give to the public the knowledge they hold, but these busy doctors have not the time to stop to educate the public or tell the people how to keep well.

It is the Woman's Auxiliary filling that gap, as it does, between the leaders in medical science and the public, who carry this message of the healing art to the public, by means of authoritative health programs, these programs being developed under the direction of the medical advisors.

The Auxiliary, by setting forth that which has been proven, renders a double service to human kind and the medical profession:

(1) In conserving of physical health and preventing human ills,

(2) In exposing those who are posing as possessed of ability to treat diseases by means that are scientifically valueless.

The Auxiliary members in their clubs, churches, schools and other organizations have a great opportunity to give to the public the basic principles of health preservation and the protection of life that is afforded by sanitation and all the phases of preventive medicine. A great deal of good has been done by teaching to all the value of wholesome living and frequent consultation with their own family doctors. This will go much farther toward maintaining good health than the treatment of disease.

The Auxiliary is indebted to Mrs. McReynolds for having conceived the idea of this great work which is going forward with tremendous force and is a lasting monument to a wonderful woman, whose vision embodied in the spirit of service, quickly awakened the interest of earnest, cultured women, who have led the organization to success.

It was Mrs. McReynolds also who went before the House of Delegates to ask the Trustees of the American Medical Association to approve an Advisory Council to guide and assist the Auxiliary in all matters of importance, and to outline and approve all health programs. This Advisory Council, composed of 6 of the master minds in the profession, has been of untold assistance to the National Auxiliary.

It is hoped that soon each county and each State Auxiliary will have its own Advisory Council, appointed by the officers or trustees of each medical society.

The Auxiliary to the Medical Society of Virginia would like to have the complete coöperation and approval of every doctor in the state for, without recognition by the doctors themselves, it is impossible to interest the women members of their families. The Auxiliary wants to urge every doctor's wife, mother, sister and daughter in Virginia to feel it is her duty to become a member of the Auxiliary in an organized effort to support and assist the medical profession.

Let us in our own state "get the vision". Let

us be informed about health conditions in our counties and on the present Medical Practice Act; then we can go to our clubs, church societies, mothers' meetings and parent-teacher meetings, feeling that others are looking to us in a health way and we will be prepared to answer intelligently questions and arguments, and we can explain "fake cures."

Let us take Mrs. McReynolds as an example, and get behind our husband's profession and work. Join your auxiliary at once. If there is not one in your county, send in your name and dues to Mrs. E. F. Truitt, and become a member of the State and National Auxiliary.

The Old Dominion has always been a leader. Why not in this crusade for health and sane medicine?

ALICE LEIGH.

(Mrs. Southgate Leigh.)

County Society Reports

ATLANTIC COUNTY

General Staff of Atlantic City Hospital

Joseph H. Marcus, M. D., Secretary

July Meeting

The regular monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium, July 20, 1928. The meeting was conducted by Dr. Walt P. Conaway, due to the enforced absence of Dr. D. Ward Scanlan. The following program was presented:

Report of Medical Service

Drs. Samuel Barbash and Sidney Rosenblatt

Dr. Sidney Rosenblatt, Associate, presented a statistical and analytical report of the cases admitted to the wards during the months of February, March and April, 1928. There was a total of 144 cases. The total number of deaths was 27 of which 15 died shortly following admission, being admitted in a comatose state; 15 necropsies were performed which embodies a splendid average relative to the number of deaths; 91 cases were discharged cured and improved; 12 cases were referred to other departments and 13 cases signed their releases before routine discharge.

Dr. Samuel Barbash, Chief of Service during this period, presented his report which follows in part:

We made no radical departures in our method of treatment, with the exception of using the physiotherapeutic modalities to a greater extent than heretofore.

We had 2 cases of patients with diabetic gangrene of the feet, one of whom was cured and the other improved enough to convince our successors on duty that diathermy is a valuable adjunct in the treatment of diabetic gangrene. I understand from Dr. Marvel that the second patient was treated with diathermy until her discharge, at which time she left the hospital with her feet intact. Two cases are of course too small a number on which to base observations, but the results we obtained are so gratifying that I feel a more thorough investigation should be conducted in the use of diathermy in the treatment of diabetic gangrene. If we compare the results obtained with these 2 cases with our previous results in the hospital, we cannot help but feel gratified that at least 2 patients left the hospital with their extremities intact, as compared with the previous record of a high percentage of deaths.

Diathermy was used only as an adjunct to our other treatment—diet, insulin, etc. It is a well known fact and interesting to note, that the clearing up of local infection helps us materially in establishing and maintaining the proper sugar balance. Our first patient with diabetic gangrene, after his feet started to improve, was treated without insulin. At the present time he is in excellent condition, with a low normal blood sugar.

We were much gratified in treating a case of pulmonary tuberculosis with 2 unhealed, draining sinuses from previous surgical operations—one a gall bladder, the other a rib resection—to note that after being treated with ultraviolet rays one of the sinuses ceased draining and healed, and the other was apparently on the way to recovery when patient left hospital. The use of ultraviolet rays in the treatment of tuberculosis is now fairly well established, though there are 2 opinions: Some believe it should not be used in tuberculosis of the lung; others believe it is valuable in the treatment of these cases. In using ultraviolet rays in pulmonary tuberculosis it is essential to know what is being done, and what the aim is. When given in very small, slowly increasing, tonic doses it increases the hemoglobin and the number of red blood cells, and in this way improves the patient. The object is never to cause even a first degree erythema, but instead to produce a very gradual tanning of the skin. In the case mentioned, of tuberculosis with open sinuses, the treatment was entirely tonic. I have treated a number of patients in my office by this method, and all have shown material improvement.

In the treatment of surgical cases, in the treatment of neuritis and some other conditions, where an attempt is made to produce a severe reaction, sometimes as high as a fourth degree erythema, or blistering, we have an entirely different aim. The aim then is to produce local irritation. It has been my experience to relieve patients of neuritis and sciatica, to stimulate slow healing ulcers and slow growing skin to greater activity, with large doses of ultraviolet rays.

We were fortunate in obtaining a considerable number of postmortem examinations, the exact number being 15, out of 27 deaths; or 55.5%.

We had several cases with other conditions, in which a positive Widal was obtained, in one case as high as a 1:320 dilution. These Widals were done as routine in most cases. In spite of the positive reactions they were proved clinically not to be typhoid. I have selected a few to call to your attention.

A. M., age 21, male, was first admitted to the hospital July 8, 1927, suffering from a growth below the left knee. Patient first noticed a pain in his left ankle 6 months after a blow received at a baseball game in 1923. At the time of injury there was nothing unusual in the appearance of the ankle. In 1924 the pain was noticeable at intervals. From 1926 until July, 1927, the pain was constantly present. Biopsy was performed from the region below the knee, where a small growth had been present for 3 or 4 months. He was discharged at the end of July and ordered to the dispensary for dressings.

He was again admitted to the hospital December 19, 1927. His left leg was amputated above the knee. The laboratory report January 27, 1928, reads: "Specimen consists of a tumor removed from the leg, which had been amputated. The gross consistency is similar to that of previous examination, namely a solid, not particu-

larly dense, grayish-white tissue. Formalin fixation; paraffin section. Microscopically the picture is that of a fibromyxoma." He was discharged February 4, 1928. On March 13, he was admitted to the hospital for the third time. Upon admission he was suffering from severe respiratory difficulty. He had a large growth in the left groin. There was an area of dullness in the right chest posteriorly. He had a number of fine and coarse sibilant râles through both sides of the chest. Our impression was that he had pulmonary metastasis of the original malignant tumor of the leg. He had been in the hospital 22 days when he died. His temperature chart was that of a low grade pneumonia, ranging from 100 to 102.

E. K., male, aged 45, was admitted March 19. This is an interesting case in that patient was perfectly well until 1 month before admission, when he began to feel more easily fatigued on exertion than formerly. He had tinnitus aurium for 2 weeks previous to admission. He got out of breath easily; there was no edema of the ankles, nor evidence of decompensation; he had recently lost 18 lbs. in weight, but did not suffer from indigestion; practically the only complaint was extreme weakness.

His family history and past history were negative. His physical examination was negative except for his anemia, and that his heart upon first examination revealed a marked soft blowing systolic murmur heard at the base, but more especially in the suprasternal notch. This was not transmitted in any direction, but was heard prominently throughout over the region of his upper mediastinal area. Upon repeated examinations this murmur would disappear and appear again, giving a perfect example of the functional murmur of anemia. We thought his liver and spleen were enlarged slightly, and were rather pleased to think we had come across a case of Banti's disease.

Considerable study was made of this case. Dr. William Wescott's report follows:

"Patient's abdomen very rigid; palpation difficult. I can find no definite evidence of ulcer in the stomach or duodenum. The pyloric muscle seemed to be wide. There was an inconstant irregularity of the pyloric border of the duodenal bulb, and increase of width of the pyloric muscle; may be due to spasm or hypertrophy; spasm would have to be ruled out. No conclusions could be drawn. Nothing further seen in the gastro-intestinal tract."

X-ray examination of the heart is as follows: "The transverse diameter of the heart at its widest is 5½ in. and that of the arch 1¾ in. The contour is well within normal limits, as are the measurements. Nothing unusual seen in the lung field."

Frequent blood counts were made, but only 4 of especial interest are reported here.

March 20—

R. B. C.1,750,000
 W. B. C. 3,500
 Hg. 26%3.72 gms.%
 Color Index7 plus
 Polys.79%
 S. Lym.14%
 L. Lym. 2%
 Eosin. 1%
 Trans. 4%
 Moderate poikilocytosis; moderate polychromasia; moderate anisocytosis, macrocytes predominating.

March 30—

R. B. C.1,150,000
 W. B. C. 6,500
 Hg. 22%2.9 gms.%
 Color Index1.0 plus
 Polys.80%
 S. Lym.17%
 Eosin. 1%
 Baso. 1%
 Trans. 1%
 Marked polychromasia and anisocytosis, macrocytes predominating. Numerous poikilocytes, 3 reticulated megaloblasts and 4 nucleated normblasts seen.

April 6 a blood transfusion of 440 c.c. was given, and on April 9 the blood count was—

R. B. C.2,300,000
 W. B. C. 7,200
 Hg. 30%4.14 gms.%
 Color Index63
 Polys.80%
 S. Lym.15%
 Baso. 1%
 Mono. 3%
 Marked anisocytosis, with macrocytes predominating; few microcytes; few poikilocytes; moderate polychromasia, nucleated red cells (macroblasts).

A second blood transfusion was done April 16 of 200 c.c. and the next day the blood count was—

R. B. C.2,790,000
 W. B. C. 6,200
 Hg. 58%
 Color Index1 plus
 Polys.73%
 S. Lym.17%
 S. Lym.10%
 Marked anisocytosis, macrocytes predominating; numerous microcytes; few poikilocytes and occasional polychromatic cells.

There was no occult blood in the stools. Gastric analysis showed complete absence of hydrochloric acid. After much study we arrived at the conclusion that in spite of the at times low color index we were dealing with a case of pernicious anemia. This was apparently verified by the fact that patient responded satisfactorily to the feeding of liver and liver extract. He was discharged April 22, very much improved after being in the ward for 35 days.

V. B., female, age 39, admitted January 31. Family history was negative, past history had no bearing on present illness. When I first saw this patient she was sitting up in bed, unable to lie down because of extreme dyspnoea. She had severe pain in the lower part of her chest anteriorly, and the upper part of her abdomen. My first examination on February 1 revealed a small area at the angle of the scapula posteriorly where the breath sounds were increased on expiration. My opinion at the time was that this was an old lesion, there being no evidence of acute inflammatory condition such as pneumonia or pleurisy. On February 3, there was an increase in this area to a patch several inches in diameter. I revised my opinion that this was not an acute inflammatory condition, and concluded there might be a spreading pneumonic consolidation. February 4, Dr. Rosenblatt noted on the progress sheet that the patient complained of a great deal of pain in the chest and back, was yelling loudly, appeared hysterical, but was

reassured by the doctor's visit. February 5, the patient complained of extreme pain in the epigastrium, had marked distention with tympany on percussion. In the afternoon of the same day she suddenly collapsed. Her blood pressure dropped to 60/46. Further examination of the chest showed that the area of increased breath sounds in the lung had become indefinite, and I doubted pneumonic consolidation. We were of the opinion at the time of her collapse that she was suffering from an internal hemorrhage, possibly the lesser peritoneal cavity, but were not certain. The patient died at 9:40 the same day. A postmortem examination was obtained. The report follows:

"Body of a well-nourished, pallid, adult female; apparent age, 39 years; no external marks of interest.

Thoracic cavity: Right pleural cavity filled with blood and clots. The pleura presented no inflammatory or malignant processes. The right lung is collapsed and on the posterior margin there was a marked hemorrhagic infiltration along the posterior margin.

The entire posterior mediastinum was filled with blood clot partially organized. No evidence of rupture or laceration of the lung could be found.

The heart and pericardium showed no evidence of trauma or rupture. The heart was enlarged in all diameters and the myocardium was pale. There were no valvular or endocardial lesions. The aorta was normal and there was no aneurysm, tear or sign of trauma or disease.

The intestines and stomach were moderately distended, the liver, spleen, and pancreas were normal; the kidneys showed a chronic interstitial nephritis.

Anatomic diagnosis: Hemorrhage into right pleural cavity and posterior mediastinum; collapse of right lung; chronic myocarditis; cardiac hypertrophy; chronic interstitial nephritis.

Micropsy—(1) Kidneys: Picture is that of a well marked chronic interstitial nephritis; (2) Lungs: Sections show a perceptible degree of congestion, desquamation of the alveolar epithelium and small areas of interstitial hemorrhage.

The picture is more of a chronic inflammatory process than of tuberculosis or pneumonia. There is no histologic indication of malignancy nor anything else explaining the hemorrhage encountered at autopsy."

Unfortunately, in doing the necropsy we were not skilled enough in handling the tissues, with the result that the spot from which the hemorrhage occurred was obliterated and we were unable to accurately locate it. The hemorrhage apparently first occurred in the posterior mediastinal space. The posterior mediastinal space contains the thoracic part of the descending aorta, the azygos and the 2 hemi-azygos veins, the vagus and splanchnic nerves, the esophagus, the thoracic duct and some lymph glands. As the aorta seemed to be intact the assumption is that the hemorrhage arose from one of the above mentioned veins. This, of course, we cannot prove. I have been unable to find any record where these veins have been known to rupture.

J. S., male, age 11, was also presented at the March County Medical meeting. I am glad to exhibit him again tonight, in his present condition. For those of you who were not present, I will briefly outline his history. Ten days following an attack of influenza at the age of 3, he started bleeding from the nose and gums. This continued for the next 8 years, at intervals

between hemorrhages from 2 or 3 months, to a year, and once the interval was 18 months, each attack becoming more serious. When he first came under my care in 1923, I used a vaccine of the hemolytic streptococcus, cultured from his teeth. Later he was given blood transfusions and whole blood intramuscularly. These all gave him temporary relief lasting for varying intervals. His blood picture was typically that of purpura hemorrhagica. The platelet count was extremely low, and the retractility of the clot was practically absent after 72 hours.

He was admitted to the hospital January 16, and was discharged February 24. About the middle of April he was operated upon in the University Hospital, at Philadelphia, by Dr. George Muller, who did a successful splenectomy. The spleen was 50% larger than normal and microscopically showed evidence of a hyperplasia. The operation was followed in 2 days by another blood transfusion, he made an uneventful recovery and was discharged after several weeks. He has gained in weight, and appears to be completely well now. His blood count today is as follows:

R. B. C.	3,940,000
W. B. C.	10,050
Hg. 75%	10.35 gms.%
Color Index9 plus
Polys.	80%
S. Lym.	19%
Eosin	1%

Coagulation time is 3½ minutes; bleeding time is 4 minutes; blood plate count is 158,000 per cu. mm.

Purpura hemorrhagica, as you know, is a disease in which the reticulo-endothelial system is at fault. Included in the reticulo-endothelial system are the spleen, certain cells in the bone marrow called megakaryocytes, some cells in the liver, the adrenals, and some lymph glands. When the spleen is the chief offender a splenectomy usually results in recovery. When the rest of the system is at fault the chances are not so good. Over 80% of chronic cases of purpura hemorrhagica have been cured by splenectomy. Spence, of London, reports in the January British Journal of Surgery, 101 cases, with over 80% recoveries. Statistics since then are not yet available, but I believe this case is one which will help swell the total.

A discussion followed by Drs. Andrews, Stewart, Kilduffe, Johnson and Mason, after which the meeting adjourned.

August Meeting

The stated monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium, August 17, 1928. The meeting was called to order by Dr. D. Ward Scanlan, President.

The scientific program was presented as follows: Report of Surgical Service, Dr. Homer I. Silvers, Chief; Dr. John S. Irvin, Associate. Case Reports—Consecutive Perforated Ulcers of the Stomach, Dr. Robert Durham, Resident Physician.

Dr. Robert Durham presented a series of perforated ulcers, 5 in number, from the service of Dr. Homer I. Silvers, attending surgeon. The dissimilarity of the symptomatic expression involved in these cases was emphasized, and the various causative factors were discussed.

Discussions: Dr. Samuel Barbash briefly outlined the relationship of the usage of tobacco to

the formation of ulcers, stating that the end-results obtained by different investigators proved that the use of tobacco was neither harmful nor otherwise related to the formation of ulcers. He emphasized the relationship of gastric ulcers to lues and stressed the necessity of eliminating syphilis as a primary cause of gastric crises.

Dr. Clarence L. Andrews reviewed some of the outstanding features as presented by Draper, who mentions the more or less definite relationship of the physiognomy of the individual as related to the type of ulcer patient; the blood picture is a valuable adjunct in diagnostic differentiation as to the stage of ulcer, especially in hemorrhage. He emphasized some of the various causes, such as focal infections irritating the gastric mucosa; metabolic disturbances; toxic material causing catabolism in the tissue; and possibly the causative agent being carried by the blood stream.

Dr. D. Ward Scanlan recounted a case in an adult female with a characteristic fascies described by Draper; this patient weighed 180 lb. and presented the symptoms of duodenal ulcer; a roentgenographic study by Dr. C. B. Kaighn disclosed an ulcer, the size of a fifty cent piece. This was treated for a period extending over 14 months, during which time the patient received a glass of milk every hour each day for 6 months, following which gradual additions were made to the diet. Intravenous injections of iron arsenite and glycerophosphates were given once a week. A later report, both symptomatic and roentgenographic, demonstrated a remarkable improvement.

A second case presented was that of an adult male with a healed ulcer accompanied by periduodenal adhesions.

Dr. Scanlan then reported a series of "varicosities of the esophagus" in which the dominant symptom was hemorrhage. He further presented a differential diagnosis between hemorrhage caused by gastric or duodenal ulcers and varicosities of the esophagus.

Dr. Homer I. Silvers, Chief of Surgical Service, outlined in brief the general phases of his service.

Dr. John S. Irvin, Associate in Surgery, presented a statistical report of the service of Dr. Silvers for the months of May, June and July 1928. The total cases numbered 205; 79 being subjected to operative procedure. Following a classification of the various cases admitted, Dr. Irvin briefly recounted the salient features of the mortalities, the large majority of which were traumatic in type. Several moribund patients with pathology of the abdomen were also analyzed.

A patient was exhibited with what was apparently a case of sporotrichosis, although the organism was never demonstrated.

Sporotrichosis is infectious and usually chronic, affecting skin and subcutaneous tissue, characterized by the formation of gumma-like nodes, abscesses, ulcers and inflammatory infiltrations, cultures from which show a fungus or hyphomycete of the genus *sporotrichum*. The lesions are usually multiple.

It has a wide distribution through the world. Many cases have been reported in the United States. The fungus occurs in cultures in the form of a branching septate mycelium with abundant formation of spores. It grows on most ordinary culture media. The growth in the original cultures is usually slow, the colonies appearing after a week or more.

Clinical Forms — Disseminated Gummatous

Sporotrichosis. A gumma appears at first as a small hard, elastic, painless nodule, not exceeding 5 or 6 mm. in diameter, situated in the subcutaneous tissue. It slowly grows and may attain a diameter of 20 to 30 mm. The skin over it becomes pink to purplish in color; it then softens; it does not totally break down, the softening occurring only in the central portions, and the resulting abscess is usually cold and painless. Perforation of the skin and the formation of an ulcer may or may not take place. Inflammation of the lymph nodes is rare.

In certain cases extracutaneous lesions have been observed, among which may be mentioned the following: ulcerative and papillomatous inflammations of the throat; gumma-like lesions of the muscles; periostitis; otitis; osteomyelitis; synovitis; inflammation of the ocular tissues, and abscess of the epididymis.

Localized Sporotrichosis. In this form the sporothrix is supposed to gain entrance through a wound in the skin where it causes an initial lesion from which the infection travels by the lymph channels and causes the formation of nodules, abscesses and of ulcers along their course. There may or may not be inflammation of the lymph nodes. The upper extremity is most frequently affected. The period of incubation is said to be 6 days or longer.

Whatever be the form of sporotrichosis, its course is almost always chronic and the general condition of the patient is slightly affected in most cases.

Treatment. The basis of this is the internal administration of iodids and dressing the lesions with iodine and potassium iodid. KI or similar compounds should be given up to 90 gr. or more per days.

Case: J. K., age 75, male, admitted on July 6, 1928, with infection of the left ring finger.

Five weeks before admission he noticed a small white spot at junction of middle and distal phalanges of left ring finger, palmar aspect. In a few days it started to swell and become painful. It was incised by his physician. The finger became worse and after a few days he was sent to the dispensary for treatment. Here the finger was incised more widely, but it did not improve.

Local Condition. The left ring finger is swollen about twice its normal size. There is an area of sluggish granulation tissue at the distal interphalangeal joint. The tendons do not appear to be involved.

There were some nodules on back of hand and forearm; these were not tender; not much attention was paid to them at this time; T. P. R. normal; Leukocytes were 14,000; Polys 70%; S. Lymphs, 30%; R. B. C. 3,760,000; Hgb. 80%; urine negative. The finger was incised more widely under gas; the flexor tendon and joint did not appear to be involved; discharged on third day; blood Wassermann was negative.

Readmitted 3 days later because nodules had become more numerous and larger. At this time the wound of the finger showed a large granulating area. There were numerous subcutaneous nodules of the dorsum of the hand and on the palmar and medial aspects of the forearm and arm to the axilla, evidently following the course of the lymphatics.

These nodules varied in size from about 10 to 75 mm. Some were hard with little change in the overlying skin; some were fluctuating and the overlying skin was pink to purple. They were not tender nor painful. Several fluctuating nodules

were incised and semi-purulent material evacuated. One nodule was resected and sent to the laboratory. T. P. R. still normal; Leukocytes 0,000; Polys. 79%; S. lymph. 21%; R. B. C. 800,000; Hgb. 75%.

Some days after admission Dr. Kilduffe saw the case and suggested that it might be sporotrichosis. Patient was immediately put on potassium iodid gr. XX t.i.d.

From this time on very few nodules appeared. Those which were already formed began to subside, some softening, some not. The granulating wound became steadily smaller until at the present time it is almost healed.

Numerous cultures of the wound and nodules were taken; showed nothing but staph. aureus and several times a yeast which was probably a contamination.

Section of nodule showed picture of low grade chronic inflammatory process without histologic indication of its character or origin.

Dr. Homer I. Silvers outlined the important diagnostic findings in: (a) sarcoma of the viscera diffuse in character; (b) case of retrocecal gangrenous appendix with diaphragmatic abscess.

Discussions. Dr. Kilduffe stated that no organism was demonstrated in the case of sporotrichosis due probably to the early administration of potassium iodid and the taking of late cultures, feeling that if cultures were made early and prior to the administration of potassium iodid, organisms would probably have been obtained. A differential diagnosis between sporotrichosis and tularemia followed.

Dr. D. Ward Scanlan described the 4 types of tularemia following with a differential diagnosis between acute hemorrhagic pancreatitis and post-cecal gangrenous appendicitis with free pus in the abdomen.

Dr. Silvers stressed the importance of being observant at all times regarding renal infections in abdominal cases, outlined as follows:

Our attention has been directed to the urinary tract a sufficient number of times to impress upon us the need of always keeping in mind renal infections or pyelitis in nearly all abdominal cases.

There are patients who come into the hospital with a diagnosis of appendicitis already made that on closer investigation proves to be pyelitis or other urinary condition. A certain proportion may be subjected to an operation that may have been unnecessary, and as you would expect, does not cure the pain in the abdomen or back. Because a patient has a pain in his lower right quadrant does not of necessity give him the right to have his abdomen opened and his appendix removed.

Pains from the right urinary system so frequently give actual or referred pain in the right lower quadrant that we must always think or consider some infection, distortion or malposition of either kidney, pelvis or ureter of the right side.

While we are looking for facts or symptoms upon which to base a diagnosis, we must remember that pyelitis may be coexistent with any intra-abdominal condition. To see pyelitis and appendicitis in the same patient is common, if we make the search.

It immediately becomes a question when we find evidence of infection of the urinary tract with pain on the right side with various degrees of tenderness and rigidity—first, whether the condition is one of pyelitis that has preceded appendicitis; secondly, pyelitis that is coincident with

appendicitis; or third, whether it is not pyelitis alone.

Where there is malformation of the urinary tract above the bladder orifice of the ureter; where there is a movable kidney; an intermittent hydro nephrosis; passage of stone; in fact anything that blocks or impedes the free drainage of urine, there will be pain. Pain not only in the loin and back, but following down along the ureter, and should this be in the right side the danger of confusion with a tender appendix is multiplied.

Poor drainage of the kidney accompanied by infection will at some time give rise to febrile reactions. The reaction is not constant in type; where it is sharp with abdominal symptoms associated with any rigidity the diagnosis becomes more difficult.

The common infecting organism of the urinary tract is the common "colon bacillus" followed by staphylococcus, both of which are in the bowel, particularly in an inflamed appendix.

Emergency cases will give the greatest proportion of abdomens opened for appendicitis to find comparatively normal appendices.

While that is true of acute cases, the fact is very evident that in milder or somewhat more obscure cases a considerable number of abdomens are opened for presumable appendicitis. This is the type in which the patient returns with the same or similar symptoms that have not been relieved by the operation, and in these you will find the greatest proportion of urinary pathology.

The hematogenous route of infecting organism showing in the urinary tract has been accepted as the common route, and when the primary source of infection is in the abdomen we find a high proportion of urines showing evidence of infection.

Recently, I had occasion to search the records of our hospital for the year 1927, and in doing so I co-related the cases of appendicitis and the urines of those that showed signs of increased urinary output of pus cells.

We found that there were 123 cases of appendicitis listed, and of these there were many that showed contiguous or other tissues infected; particularly was this so in adnexa disease in women.

Every case that could not be classed as pure appendicitis was eliminated, which eventually brought the total cases of appendicitis down to 84.

These 84 cases represented all types of appendiceal inflammation, from the simple inflammatory reaction to the diffuse peritonitis. In the study of these urinary reports one was forcibly struck by the fact that pus in the urine was common.

We have no means of determining whether any of these cases had signs of infection or pus in their urine before coming into the hospital but certainly the search showed a high percentage, about 18%, of urines passing pus in very definite quantities.

The following case history exemplifies quite clearly the need of always keeping in mind infection of the kidney.

A man, age 28, was admitted to the hospital as a case of intestinal obstruction. His chief complaint was a pain in the abdomen, especially around the navel. His family history is unimportant, while he himself had the ordinary childhood disease. He neither smokes nor chews tobacco; drinks occasionally; has done laboring work; has been a chauffeur; and at present is a chicken picker; can recall no serious illness; had neisserian infection at the age of 23.

Present illness began 2 a. m., Aug. 27, 1928. Was awakened from sleep by pain in abdomen; poured himself a glass of citrate magna which he drank and promptly vomited; secured some relief by use of turpentine on abdomen.

His bowels had moved regularly previous to this attack except the 2 days directly preceding, during which time there was no movement.

Patient went to the dispensary 7:30 a. m. and again later when he was admitted.

He is a well-nourished male adult, seems to rest fairly comfortably on his back; head is negative; eyes, ears and nose show nothing of interest; his teeth are in poor shape; tongue coated; and throat slightly infected.

Thorax. Chest is well developed and fairly symmetrical, good respiratory excursions, but the breathing almost entirely above diaphragm. Percussion gives good resonant note, breath sounds easily heard and seem of normal character.

Heart. Apical, beat not visible; beats increased, 100 per minute.

Abdomen markedly distended and tense. Cannot palpate anything through the distention. Slight discomfort and pain around umbilicus. On pressure there is marked tenderness about an inch below umbilicus and some on the right side.

There is also pain and tenderness on pressure in left flank. Percussion note is tympanic, with dulness in flanks. Impossible to see, feel or hear peristalsis in abdomen.

This man, in the face of a superficial examination, did show positive signs of obstruction; at least the bowels had not moved for several days and he had an enormously distended abdomen. At the same time his temperature was ranging from 100 to 101, with a leukocyte count of 12,800, and a polymorphonuclear count of 89%.

We were not satisfied that he had a pure obstruction, but rather a condition of ileus from an undetermined cause. After going over him many times we felt sure that his left kidney or kidney region was distinctly more tender than any other portion of his abdomen.

His first urine examined at the time showed a Sp. G. 1030—100 mg. % of albumen, sugar 2.1% with numerous pus cells. His blood contained 160 mg. % sugar urea 18 mg. %.

He was cystoscoped the next day. At that time his white count had gone to 14,650, with a 90% poly count.

There was some difficulty in the cystoscopic examination because of the pushing of the intestines down on the bladder and from a cloudy medium due to some bleeding following the rupturing of structure near the vesicle orifice.

Dye showed in the urine from the right kidney with intensity in 11½ minutes. After 25 minutes no urine or dye from the left side. On withdrawing the catheter several spurts of pus and urine were seen. With the assistance of the Urological Department there was a diagnosis made of a left pyonephrosis.

He was put back to bed and his distension was gradually relieved until his abdomen came down to practically normal. Then, as happens in many of these ignorant individuals, he felt much better and immediately signed a release and went out, no persuasion being of any avail.

Following a general discussion by various members of the staff the discussion was closed by Dr. Silvers.

There being no further business the meeting was adjourned.

HUNTERDON COUNTY

Leon T. Salmon, Secretary

The Hunterdon County Medical Society held its summer meeting July 24, 1928, at the Glen Gardner Tuberculosis Sanatorium as the guest of Dr. Samuel B. English.

The meeting was attended by many of the wives of the members and as soon as all had arrived at the Sanatorium, Dr. English had a dinner served which put everyone in good humor. The ladies retired somewhere into the unknown while the society entered into its regular session in the Chapel building.

Members present were Drs. Apgar, Decker, English, Fulper, Fuhrmann, B. M. Harmon, M. H. Harmon, Leaver, Low, Salmon, Tompkins, Williams. As guests there were present the President of the State Society, Dr. Mulford; Recording Secretary, Dr. J. Bennett Morrison; Secretary State Board of Medical Examiners, Dr. Charles B. Kelley, and Dr. Quigley, of Hudson County, author of the Title Bill.

In response to a request from the Nursing Activities Committee, Dr. G. B. Tompkins was appointed a representative of this society to aid the committee in their work.

A letter from Dr. Henry O. Reik was read which again outlined the society's duty to approve and allow the formation of a woman's auxiliary to the society. This letter was placed on file, on motion of the society. Mrs. Taneyhill then addressed the meeting and stressed the need of a woman's auxiliary. President Mulford prefaced his approval of the woman's auxiliary with an exposition of the work and objectives of the State Society. His address was followed by that of Dr. J. Bennett Morrison who also advised the society to adopt a favorable attitude toward the auxiliary.

Following this series of addresses, Dr. Kelley, of the State Board of Examiners, gave a talk which acquainted his audience with the nature and difficulties of the Board's work and asked cooperation. His talk was well received.

Probably the most interesting talk of the day was given by Dr. Quigley, of the Hudson County Medical Society. Under the rather imposing title, "Medical Economics", Dr. Quigley touched, very practically, upon certain actual needs and circumstances incident to the practice of medicine as it is today and made a very valuable suggestion anent the purchasing of all kinds of supplies at wholesale prices by the members of the State Society through a state society agency to be established. Several members expressed approval of this suggestion, hoping that it might be evolved into a working department of the state Society.

Following the address of Dr. Quigley, a discussion of the woman's auxiliary was taken up and each member was asked his opinion concerning the project. While some few approved of the idea the majority assumed a negative attitude toward the plan and voted for it rather than that the State Society quota should be complete than that they expected it to be a positive working organization in this county.

A vote of thanks to Dr. English was interrupted by the doctor himself.

The society asked Dr. Morrison to go to the assembled wives of the men present and instruct them in the formation of their society.

The meeting adjourned and afterward Dr. English displayed a number of series of x-ray pictures showing the progress after artificial pneumothorax in acid-fast lung infections.

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REPORT ON A CASE OF LYMPHO-SARCOMA OF THYMIC ORIGIN WITH ACUTE LYMPHOID LEUKEMIA

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We wish to report a case of lymphosarcoma of thymic origin, or a malignant thymoma, with acute lymphoid leukemia. It is our contention that whenever such cases are encountered, they should be reported, not solely because of the relative rarity, but also because of the clinical and pathologic interest that centers on such a condition; clinically because of its diagnostic pitfalls and serious nature, and pathologically because no group of tumors has more successfully resisted attempts at interpretation and classification than those of the thymus. This example illustrates a particularly unusual variety of the tumor, the small-celled type with a concomitant lymphoid leukemia, such leukemias being considered atypical and especially malignant.

On the evening of January 19, 1928, there was admitted to the hospital a white boy, aged 8 years, in a state of extreme dyspnea, and perspiring profusely.

He was an inmate of a children's Home, and practically no history could be elicited, but

hospital records showed that he had been in this institution on 3 previous occasions. The first admission was February 18, 1921, when he was 19 months old, suffering from an upper respiratory infection; discharged April 19, 1921, 60 days after admission. His second admission was June 7, 1922, when he was 3 years of age, for observation, as he "had not been well for some time"; did not relish food, and was inclined to be dull and apathetic. He did not walk well at that time, and had a history of rickets. He was treated for intestinal disorders, and was discharged June 20, 1922, 13 days after admission. His third admission was a year later, in 1923, when he was 4 years of age, for tonsillectomy and adenoidectomy. Since his last discharge he had been at a children's Home, where there was a record of no illnesses.

For 4 days previous to admission, there was noticed a swelling in the anterior part of the neck, and for 15 hours he had suffered a moderately severe dyspnea, which became so acute that he was brought to the hospital.

Physical examination revealed a poorly developed child suffering extreme respiratory distress, slightly cyanotic, and perspiring profusely; eyes showed a moderate amount of exophthalmus; there was a large swelling in the region of the thyroid, and cervical, axillary, and small inguinal glands were palpable; whole left chest was markedly dull, especially the upper anterior portion, and heart sounds were entirely obliterated by signs of pulmonary congestion in both upper lobes; both lung bases were dull, and signs of fluid were elicited in the left base. Temperature, 100.2°;

pulse, 120; respirations, 30. Leukocytes 22,800, polynuclears 76%; urine showed indican and diacetic acid. The tentative diagnosis was adenoma of the thyroid, with obstructive symptoms.

The lower left chest was immediately aspirated, 600 c.c. straw-colored fluid being withdrawn, which presented no growth on culture, and gave a transudate reaction. This improved the respiratory embarrassment.

X-ray examination of the chest on the morning following admission showed a large tumor of the mediastinum, its outline reach-

ing to the external part of the upper half of the left lung, and extending to the middle part of the upper lobe of the right lung, and to the middle part of the lower lobe of the left lung, where the outline was very irregular. lower left chest was again aspirated, 575 c.c. fluid being withdrawn, which showed the same characteristics as that first aspirated. Patient also received on this day x-ray treatment of the tumor mass, which was followed by another attack of severe dyspnea and coughing, and pains in the chest. Temperature ranged from 98° to 101° F., and pulse from 70 to 130. A leukocyte count, January 31, 13 days after admission, was 19,050, with a differential of 48% polynuclear leukocytes, 48% small lymphocytes, 1% large lymphocytes and 1% eosinophiles. At this time the exophthalmus

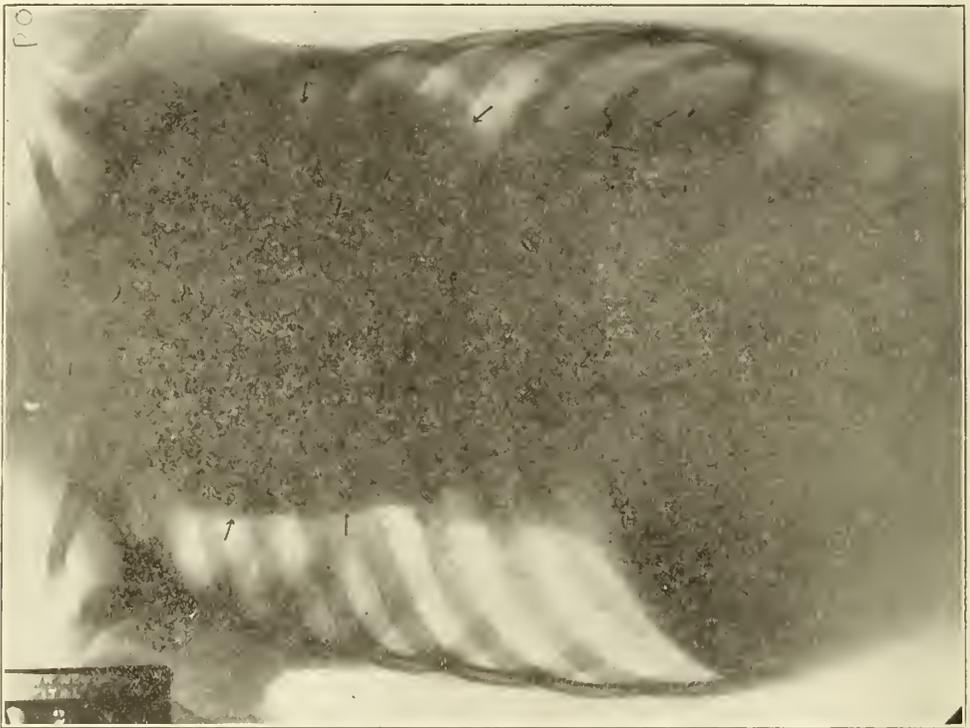


Fig. 1. Roentgenogram of the chest, showing the extent of the tumor of the mediastinum.

ing to the external part of the upper half of the left lung, and extending to the middle part of the upper lobe of the right lung, and to the middle part of the lower lobe of the left lung, where the outline was very irregular.

Four days after admission, January 23, biopsy of a cervical gland was made for evidence of possible Hodgkin's disease, but with essentially negative findings. A Pirquet test and a blood Wassermann were also negative at this time. Seven days after admission, the

had diminished, and the tumor mass in the region of the thyroid had greatly decreased in size. In spite of negative findings in the cervical lymph node for Hodgkin's disease, tentative diagnosis were maintained between Hodgkin's disease, tuberculosis of mediastinal nodes, and a malignant tumor of the mediastinum.

After a period of 2 weeks, until February 8, during which time he was relatively free from symptoms, the neck suddenly became

larger, the mass around the region of the thyroid was more pronounced, exophthalmus increased, surface veins of the upper chest became engorged, patient suffered more diffi-

culty in breathing, and signs of fluid reappeared in the left chest, which, being aspirated, yielded 600 c.c. straw-colored fluid. Two days later, on the tenth, 400 c.c. fluid

were again taken from the left chest, and 4 days later 500 c.c. were withdrawn. At this time the patient was almost continuously in respiratory distress, obstructive in nature, was

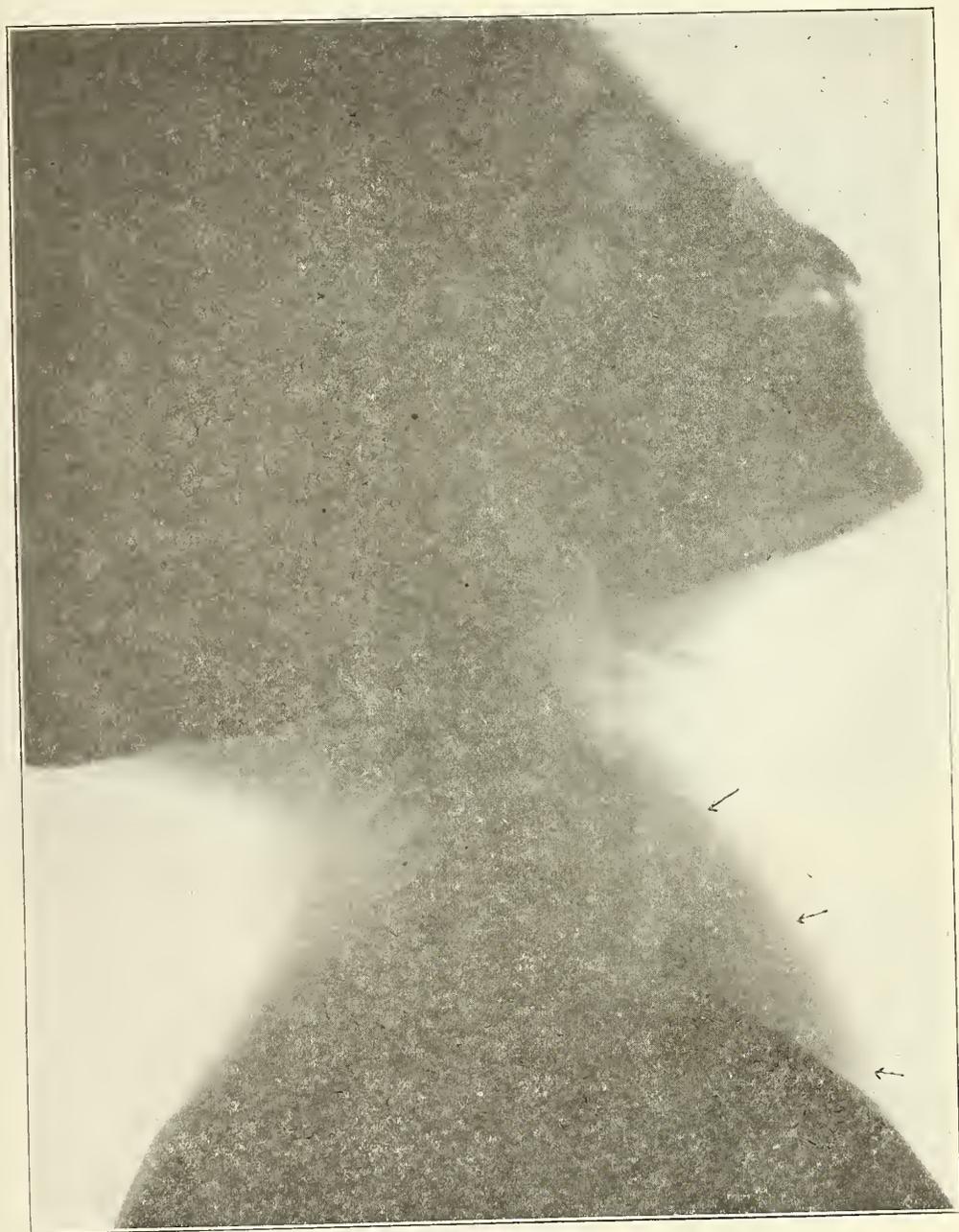


Fig. 2. Lateral view of the region of the neck, showing the outline of the tumor mass in the region of the thyroid.

culty in breathing, and signs of fluid reappeared in the left chest, which, being aspirated, yielded 600 c.c. straw-colored fluid. Two days later, on the tenth, 400 c.c. fluid

continually coughing, and was constantly bathed in perspiration.

On the following day, February 15, his neck became unusually large, eyes were bulging;

surface veins on chest and neck were more engorged than before; he perspired profusely about the head; the liver and spleen became palpably enlarged, and a blood count on this date, 27 days after admission, showed 2,950,000 red blood cells with 68% Hgb., and a white cell count of 565,000, with a differential of 7% polynuclear leukocytes, 90% lymphocytes, almost all of which were of the small type, and 3% immature mononuclear cells (Fig. 3.) Five days later another count

teasing cough, and although the patient was not wholly free from dyspnea, this was occasionally paroxysmal. However, with the sudden development of a lymphoid leukemia together with a concomitant change in the clinical picture, presenting an unusually large tumor in the neck, bulging eyes, venous congestion marked by engorgement of surface veins on chest and neck, profuse perspiration, and palpable liver and spleen, the diagnosis of a malignant tumor over that of Hodgkin's or

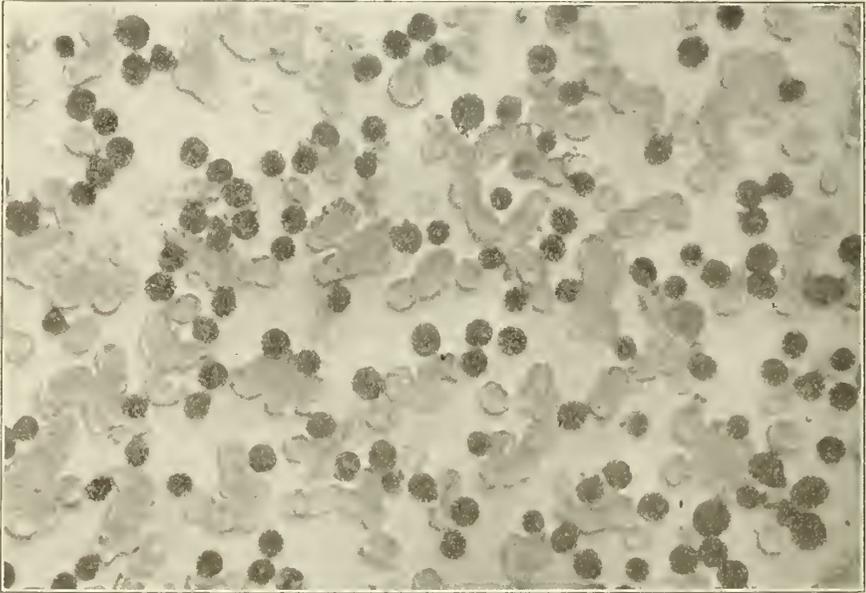


Fig. 3. Blood smear, Wright's stain, showing the small lymphocytes which have a great similarity to those cells composing the tumor mass.

revealed 1,016,000 white cells, with 4% polynuclear leukocytes, and 96% lymphocytes. During the next 6 days the clinical course was progressively downward and death occurred February 26, just 37 days after admission.

Clinically, our first impression was that this was a case of adenoma of the thyroid with obstructive symptoms, but early roentgenograms of the chest showed the mediastinal tumor, and it was then a question of a malignant tumor of the mediastinum, Hodgkin's disease, or the most frequent lesion of this type found in children between the ages of 3 and 10—tuberculosis of the bronchial lymph nodes. The local symptoms were chiefly mechanical. There was a hoarse, persistent and

tuberculosis was strongly and definitely decided upon. Though the type of tumor present had to be left necessarily to the laboratory, a clinical diagnosis was made of a tumor of the mediastinum, acute lymphoid leukemia, and enlargement of the liver and spleen.

It was with difficulty that permission was obtained to open the chest cavity post mortem, further examination of the body being emphatically forbidden. In removing the sternum and the cartilagenous rib attachments, difficulties were encountered over the upper left area of the chest, in the region of the left clavicle and first and second ribs, as the tumor mass so intimately adhered to overlying structures that to make a line of cleavage was impossible, and small pieces of cartilage had

to be left in situ to obtain adequate exposure. About 800 c.c. straw-colored fluid were in the left pleural cavity, and about 400 c.c. in the right, with both lungs partially collapsed, the left being the smaller, and appearing as 2 appendages on the sides of the mass. The tumor

of homogeneous structure except for spotted soft dark areas found on longitudinal gross section. Posteriorly, between the esophagus and the trachea, were 2 masses about the size of large walnuts, one above the other, dark in color, very friable, and soft and hemor-



Fig. 4. Anterior view of the tumor mass removed from the chest cavity, and showing constrictions across the upper portion indicating the position of the clavicles.

mass occupied the remainder of the chest cavity, surrounding and compressing the trachea, bronchi, pericardium, heart and great vessels, and extended from the region of the thyroid down to the diaphragm; no attempt was made at dissection, but it was removed in its entirety for further study. The left pleura was markedly infiltrated, with elevations extending along the intercostal spaces. The right pleura was essentially normal in appearance.

The tumor was a large, not much lobulated mass, with constrictions at both upper sides anteriorly, marking the location of the clavicles, and completely enveloping the heart. It was greyish-white, of a firm consistency, and

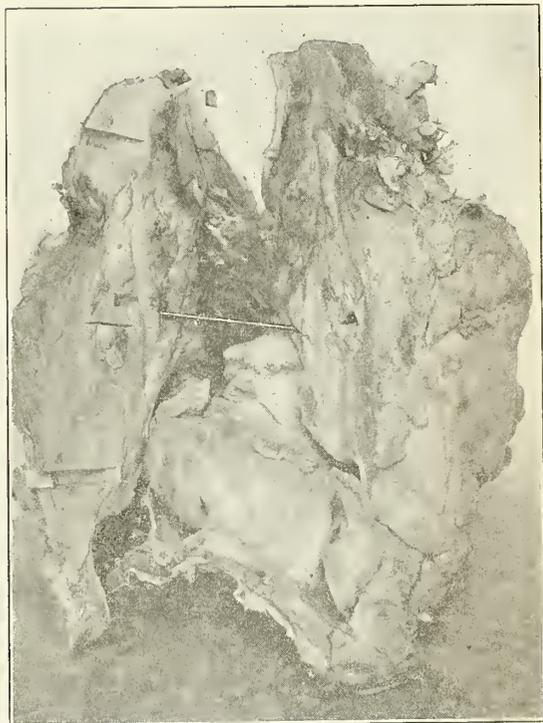


Fig. 5. The tumor mass opened, showing relation to the heart and great vessels.

rhagic in consistency. Numerous sections were made from various areas of the tumor, as well as from the hemorrhagic masses between the esophagus and the trachea, and also from the lungs, pleura, and pericardium. Sections from the tumor mass itself were composed of a diffuse growth of small round cells, and appeared to be morphologically identical with those found in the circulating blood. Careful search did not reveal the presence of giant cells, large polyhedral cells, or Hassall's corpuscles. Sections of pleura, pericardium and lung showed extensive infiltration with these small round cells, and microscopic examination of the masses between esophagus and trachea proved their hemorrhagic nature, being diffusely infiltrated with the same small round cells as composed the tumor. Con-

sequently, from the gross and microscopic examination, a diagnosis was made of lymphosarcoma of thymic origin, or, owing to the uncertainty which still surrounds the nature of the thymic round cells, the term "thymoma" may be given, with an associated acute lymphoid leukemia.

A short résumé of the structure of the thymus may help you to grasp the pathology more thoroughly. The fully developed organ consists of a stroma and reticulum, parenchyma and capsule. The supporting stroma is chiefly found in the network of arterioles,

as yet undetermined. By accumulation of cells of the reticulum in the medulla, there are formed concentric groups of flat cells which are termed Hassall's corpuscles. In addition to these structures, other cells are often seen in the thymus—many plasma cells, eosinophiles and mast cells, and giant phagocytes. We refer you to the numerous texts for more minute details of embryology, structure and function of this organ, the complexities of which will make you readily realize the fact that the problems involved in interpretation and classification of tumors of the thy-

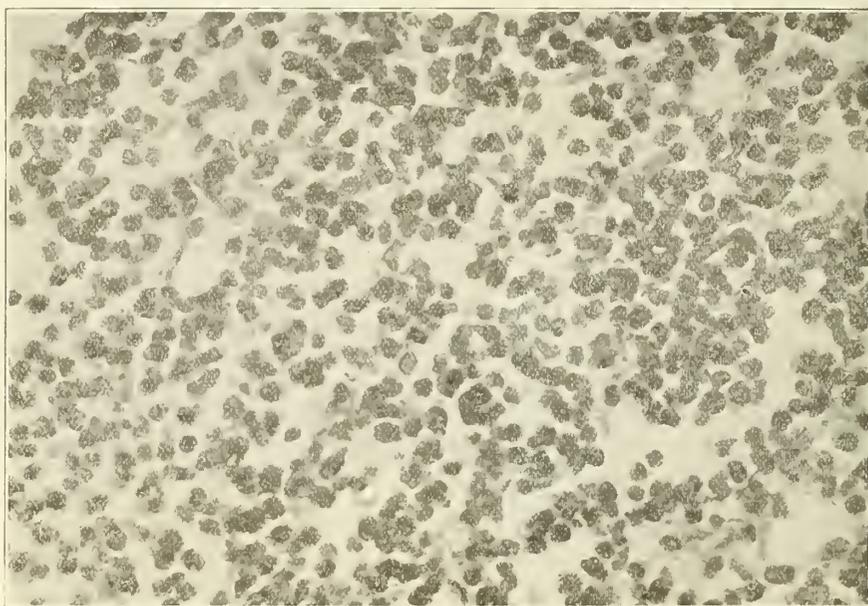


Fig. 6. Thymic tumor, Mann's acid hematin and eosin stain, illustrating the small round cells which composed the tumor mass.

capillaries and venules, to which is confined practically all of the connective tissue within the organ. The finer stroma is a derivative of the original epithelium of the gland, which becomes elongated into a fine reticulum, in the meshes of which lie the parenchyma cells which have the appearance of very small lymphocytes, from which they have not been successfully distinguished despite many studies directed to their morphology, microchemical reactions, serologic relations, or behavior in most pathologic conditions, and their origin is

mus include those which have complicated the embryologic and histologic study of the gland, while added difficulties arise from the comparative rarity and considerable diversity of the tumors, and from the somewhat imperfect knowledge of the general pathology of the thymus. Thus, thymic tumors may possess all of the structures found in the normal gland, or a preponderance of any one of them, but in general they fall into 2 main groups:⁽¹⁾ (a) lymphosarcoma, or thymoma, composed of a diffuse growth of small, polyhedral and

giant cells, and (b) carcinoma. To these are added questionable cases attributed to the stroma and called spindle-cell, or myxosarcoma. Difficulty is encountered in the histologic classification of tumors of the first group, some of which present a structure resembling that of an infectious granuloma of the type of Hodgkin's disease, and in others the reticulum cells are said to be missing, the tumor being composed of a diffuse growth of small round cells. In the gross, these tumors occupy the anterior mediastinum in the position of the thymus extending sometimes from as high as the thyroid down to the diaphragm.

ness of literature on this subject, although it has been maintained⁽¹⁾ that primary tumors of this organ are probably not as rare as the reports would indicate. In 1920 an excellent survey of the literature was given by Foot⁽²⁾, who especially mentioned a compilation of about 75 cases described up to 1911, combining all reported cases previous to 1896; of one group of 33 cases⁽⁷⁾ of thymic sarcoma considered authentic, lymphosarcoma occurred in 19, and 18 cases of this series occurred in patients younger than 25 years. References are given illustrating the fact that from 1911 to 1920, less than a dozen cases had

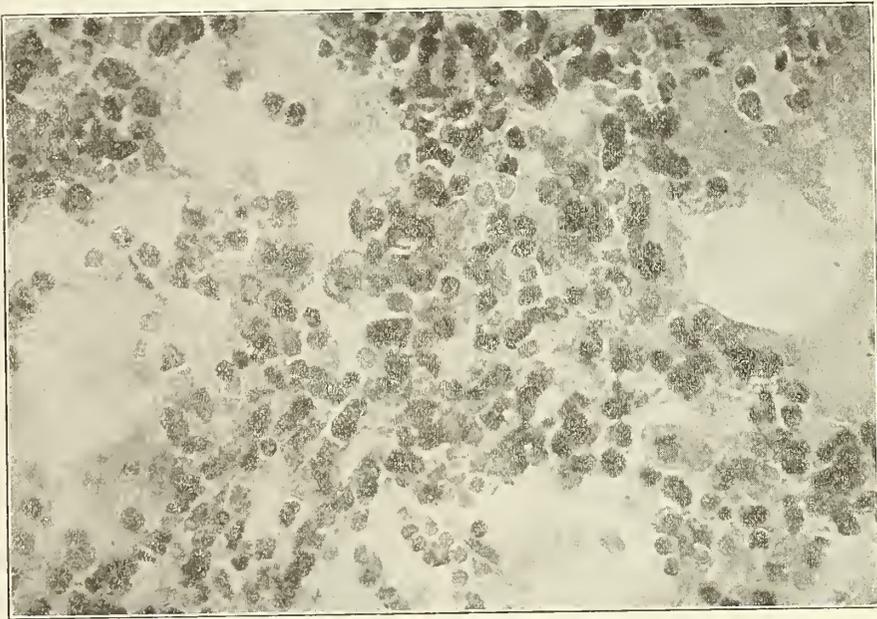


Fig. 7. Infiltration of lung, Mann's acid hematin and eosin stain, showing extensive infiltration with small round cells.

Points indicating their thymic origin may be summed up as follows:⁽⁵⁾ (a) The situation of a large, not much lobulated, firm tumor at the site of the thymus; (b) extension downward behind the sternum without infiltration of the bone; (c) involvement of the pericardium and the pleura by direct lymphatic extension; (d) a resemblance to thymic tissue on histologic examination. All of these points were exhibited in the case presented.

An index of the obscurity of tumors of the thymus is evidenced by the comparative scanti-

been reported, and from that time up to the present date, we were able to collect from the literature only 15 reported cases, one of these being a thymic epithelioma⁽⁶⁾ (making the fourth to be reported), and 3 being of doubtful diagnosis, as they were reported clinically, the patients still living. One of these reported cases⁽⁸⁾ was in a young woman 25 years of age, death ensuing 8 months after onset of first symptoms, and the neoplasm showing histologically an absence of Hassall's corpuscles. One was in a girl, aged 2 years⁽³⁾, and an-

other⁽⁹⁾ was a primary tumor of the thymus associated with tuberculosis, where inferences were made that it was not unreasonable to suppose that tuberculosis incited the cells of the thymus to malignancy, since many of these tumors are said to be of granulomatous origin. Microscopically this tumor consisted of an equal number of large polyhedral and round cells, with a few plasma and giant cells. Another reported case⁽⁴⁾ occurred in an infant 20 months old, death resulting from suffocation 9 months after the first signs were noted. Again, histologic examination of this tumor did not reveal the presence of Hassall's corpuscles. Two other cases are noted,⁽¹¹⁾ one occurring in a white girl, 19 years old, the other in a white man, 25 years of age; microscopic examination in the latter case presented a picture similar to the one here reported. In 1925 another similar case was reported⁽⁵⁾ the patient being a colored female, 38 years of age, with a malignant thymoma and a lymphoid leukemia directly connected with it. The cells of this tumor bore a striking resemblance to those in the circulating blood. Pool⁽¹²⁾ presented a case of a probable sarcoma of the thymus, with clinical findings and interesting chest roentgenograms. Two other cases,⁽¹³⁾ diagnosed clinically as thymoma, were reported mainly for the purpose of calling attention to roentgenologic characteristics, and illustrating the effects of Roentgen rays on this type of tumor. The literature of 3 other reported cases of thymoma^(14, 15, 16) was not available to us. Two more cases were presented in 1926, the first by Miller,⁽¹⁷⁾ in a boy aged 9 years, the tumor falling into the group of lymphosarcoma and into a subgroup which the small round cell is the predominant cell element. The other is reported by Brown,⁽¹⁸⁾ in a white man, aged 36, a case of a primary malignant tumor of the thymic region, and classified as a reticulum cell lymphosarcoma. The literature of 2 more cases^(19, 20) was unavailable.

In the case which we are reporting we are confronted with 2 neoplastic processes: a malignant thymoma, and an acute lymphoid leukemia, similar to the case reported by

Friedlander and Foot,⁽⁹⁾ and the question arises as to whether there has been an outbreak of cells of thymic origin, through a metastasis in the wall of a large vein into the blood stream, or with a true lymphoid leukemia. The answer to this question involves the old discussion as to the origin of the thymic lymphocytes, a résumé of which was clearly presented in the paper just quoted. Suffice it to say at the present time that we are inclined to believe that we are probably dealing with a lymphosarcoma of thymic origin, or small-celled malignant thymoma, directly accompanied by a lymphoid leukemia originating in the thymus.

To summarize, we present a report of a case of lymphosarcoma of thymic origin, occurring in an 8 year old boy, who also had an acute lymphoid leukemia, which it is reasonable to explain as a direct result from the thymoma and undoubtedly originating from it.

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CYSTITIS

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It has been repeatedly stated that to understand the etiology, pathology and symptomatology of diseases of the bladder is to possess a thorough knowledge of the diagnosis of disorders of the entire urinary tract. This implies that appreciation of bladder symptomatology is inseparably associated with the conception that an underlying, perhaps remote, lesion exists, which must be found in order that rational therapy may be instituted. The above remarks are especially true of bladder infection, which is the most frequent bladder condition encountered, and it follows that a discussion of this lesion quickly leads to consideration of renal, ureteral, urethral and perivesicular inflammations. Unless one is to commit the grave error of treating all cases of pyuria as cystitis, with the prolonged use of ineffectual and inaccurate therapeutic measures, one must constantly seek the primary focus in the urinary tract. Fortunately, the urologist possesses instruments and other means which allow reasonable precision and accuracy in diagnosis, and only after the intelligent and skillful use of these measures can the real cause of cystitis be discovered, thus giving added promise of successful therapy.

The organisms most frequently found in cystitis are the colon bacillus, staphylococcus, streptococcus and the tubercle bacillus. The gonococcus may occasionally give rise to an acute trigonitis, but the remainder of the bladder is very rarely the site of a true gonococcal cystitis. When the bladder becomes involved in the course of a chronic urethritis, one may be sure that secondary invading organisms associated with infection of the prostate and seminal vesicles or urethral infiltrations are the true cause. Instrumentation of a normal bladder, per se, rarely, if ever, gives rise to bladder infection, if care is taken not to cause trauma. Infections following catheterization for postoperative retention, frequently seen in gynecologic and obstetric practice, are only apparent exceptions. In these cases, following a single catheterization, there is frequently a resumption of spontaneous urination; but, if looked for, a residual urine of varying amounts may be found. This stagnant urine favors multiplication of the few organisms introduced. If measures are taken to eliminate residual urine by intermittent catheterization during the immediate postoperative period when spontaneous urination does not completely empty the bladder, a large number of postoperative bladder infections in women will be prevented. The above may explain the statement frequently made, that acute infection may follow the sudden emptying of an overdistended bladder during the puerperium.

One may say with considerable assurance that chronic cystitis does not exist without an underlying cause. A persistent cystitis indicates a constant infection from some focus, such as the kidney, prostate or seminal vesicles. Urinary stasis due to disturbance in the reflex arc, vesical neck obstruction, or diverticulum may be the factor which makes bladder infection possible. Intrinsic disease of the bladder mucosa and wall, such as ulcerations and neoplasms, or calculus, may prolong bladder infection. Obviously, the diagnosis of cystitis is in itself entirely inadequate, and symptomatic treatment, of necessity haphazard in nature, can only result in a high percentage of failures.

Although the bladder symptoms presented are usually the same, namely, disturbance in micturition, pyuria and hematuria, attention should be directed to the focus of infection, which superficially may present little or no evidence. This emphasizes the necessity of complete physical examination which, of course, should include careful palpation of the kidneys for tenderness, enlargement and displacement. Rectal and vaginal examination should never be neglected. Too often, however, these procedures alone are insufficient and only after careful laboratory aids, together with cystoscopy, renal function tests and radiography, can the underlying lesion be

discovered. The kidney may then be found to be the seat of chronic suppuration, retention, calculus formation or neoplastic disease. Ureteral catheterization and ureteropyelography may disclose a ureteral stricture.

In men, the presence of residual urine is a very frequent cause of cystitis. This always indicates either a neurogenic cause, such as *tabes dorsalis* or actual bladder neck obstruction due to benign hypertrophy of the prostate, prostatic cancer, contracture of the vesical neck, vesical neoplasm with ball-valve action, stone in the urethra or urethral stricture. Associated with the foregoing, cystoscopy may reveal vesical diverticula and at times calculus formation.

In women, cystocele is perhaps the most common cause of residual urine and resultant cystitis. It is also well to remember that stricture of the female urethra is not very rare and a goodly number of bladder inflammations in women will be cured by adequate urethral dilatation.

When the cystoscope is used, examination may reveal within the bladder a new growth, calculus or foreign body. On the other hand, the cystoscopic picture may confirm the presence of an extravescical lesion, such as pelvic abscess or enlarged vesicles, which may or may not have been suspected previously. Enterovesical fistula, due usually to carcinoma, but also occasionally to inflammatory adhesion and ulceration of enteric diverticula to the bladder, may easily be detected by careful cystoscopic examination.

A large percentage of cases of urogenital tuberculosis first disclose themselves by symptoms of cystitis. It is well known that bladder tuberculosis is always secondary to renal or genital invasion. Except in those neglected cases where ulceration and severe changes about the ureteric orifices form a more or less characteristic picture of vesical tuberculosis, the picture presented may be that of a catarrhal cystitis with practically no distinguishing characteristics. It is therefore always necessary to bear specific infection in mind when a young individual presents himself with long standing symptoms of cystitis, especially if a purulent, acid urine reveals no growth of or-

ganisms on ordinary culture media. The alert urologist will seek carefully for tubercle bacilli in a large percentage of bladder infections which come under his care.

Of those cases occurring in infancy and childhood, characterized by persistent pyuria and practical impossibility of bacteriologic cure by the usual therapeutic measures, a majority will be found to be due to obstructive abnormality in the urinary tract. In a recent report, Helmholtz⁽¹⁾ found abnormalities in infants in the following order of frequency: (a) cord bladder or atonic bladder; (b) ureteral anomaly; (c) dilated ureter; (d) urethral stricture; (e) anomaly of the ureteral orifice; (f) duplication of ureters; (g) vesical stone; (h) ureteral stone. From the foregoing, it is evident that the same urologic procedures are indicated in infants and children as in adults, namely: culture of urine, roentgenography, blood chemistry, kidney function tests, determination of residual urine. If these fail to disclose the cause of the pyuria, cystoscopy must be performed with ureteral catheterization and pyelography. Only then may proper therapy be instituted; and this may be surgical in a considerable proportion of cases.

It is therefore evident that intelligent care of a case of cystitis really requires a differential diagnosis between the various causes enumerated above. It is not correct to state that every case of pyuria should be subjected to all the involved urologic procedures for diagnosis. In some cases the underlying cause may be self evident and proper therapy will produce rapid results. In other cases instrumentation may be contraindicated and it is then that good judgment must restrain the natural zeal for correct diagnosis. Cystoscopy and ureteral catheterization in the presence of acute renal and bladder infections are often contraindicated because of the markedly unfavorable reactions which may follow. Certainly any suspicion of acute infection in the prostate and seminal vesicles should make one hesitate before passing instruments for the purpose of diagnosis. Even in the very best clinics an occasional death has followed injudicious instrumentation on a patient weak-

ened by chronic urinary infection and obstruction. It is well to remember that the patient should be subjected to as little instrumentation as is consistent with complete diagnosis.

Although the above statements are of the greatest importance they should not be interpreted as advocating laxity in other means of diagnosis. Careful chemical, microscopic, and bacteriologic examination of the urine, as well as renal function tests, blood chemistry and plain roentgenography, should never be neglected. If these have failed definitely to localize the lesion and if a reasonable period of therapy has been without avail, then cystoscopy should be performed, with or without ureteral catheterization, depending on the conditions found. Here again one must emphasize that nothing be done that is not essential for making the diagnosis. Ureteral catheterization and pyelography are often invaluable but it is only too true that they are not without some degree of danger and should not be undertaken without definite indication.

Discussion of the treatment of cystitis is beyond the scope of this paper. Suffice it to say that effective treatment of any case of cystitis consists in eradication of the cause. In many instances surgical measures alone will be curative; in others, medical measures, with or without instrumental procedures, may suffice. In either event the attack must be directed at the primary focus, and the secondary infection in the bladder will frequently take care of itself.

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PYLOROSPASM AND PYLORIC STENOSIS IN INFANCY

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These conditions occurring in early infancy are so closely allied that hypertrophic pyloric stenosis is considered as simply an advanced degree of pylorospasm. Probably an introduction of our subject with a short descrip-

tion of the clinical picture of these conditions will help us in this discussion.

An infant, born apparently normal, progressing more or less favorably in its feeding and nutrition, begins after 2 to 4 weeks to vomit with force, usually immediately after feeding, occasionally retaining 1 or 2 nursings and then vomiting all or what seems to be all of these. There is usually visible peristalsis of the stomach, sometimes of the intestines, more or less constipation, with rapid loss of weight, and when hypertrophic stenosis exists a mass may be felt in the pyloric region, usually described as spool or olive shaped, which ordinarily is found above and to the right of the umbilicus. The best time to palpate for a tumor is directly after the infant has vomited. The recognition of these two conditions is important in that, while presenting symptoms in the main of disturbances of nutrition, food regulation alone does not correct the fault and is often the cause of loss of infant life through lack of recognition.

The question of differentiating pylorospasm from pyloric stenosis has been much discussed. At the present moment the weight of authority would seem to indicate that pylorospasm and pyloric stenosis are two definite clinical entities. But this is by no means a general opinion. Holt believed that hypertrophy is always present before the spasm, and in this way accounts for the interval of weeks from the time of birth until the onset of symptoms not occurring until the spasm has appeared.

Downes believes that the theory that best explains the sequence of events is that a true malformation is present at birth, consisting of an abnormal thickening of the circular muscle of the pylorus, and that the effort necessary to force food through the narrowed and elongated pyloric lumen produces circulatory disturbances resulting in edema. As the food is increased in amount and the muscular effort becomes greater, the lumen narrows down until finally, at the tenth day or later, it becomes more or less completely obliterated. Spasm, according to the view most largely held, is a superimposed result and not the cause of the stenosis.

Well marked tumors of pyloric hypertrophy

have been reported in the new-born as well as in infants born prematurely, which supports the view that hypertrophic stenosis is a congenital defect.

The chief symptom, vomiting, usually appears between the third and sixth week of life. Here is a disease of serious import, which is met with almost always within a single certain month of a baby's life. There is no disease that presents an age period as exact and suggestive as pyloric stenosis.

In diagnosing pyloric stenosis it should be remembered that mother's milk is the least likely of all foods to disagree with the baby in these first few weeks of life and that this ailment is one that is most frequently met with in breast fed infants, as most month-old babies are still breast fed; seen also, of course in bottle fed babies and in some late discovered cases where the infant has been on every known proprietary food before the true condition was recognized.

The baby is usually a vigorous and hearty infant at birth. It nurses well, thrives, and prospers during the first 2 or 3 weeks. Its gain in weight is usually rapid and consecutive. The initial loss is made up at the proper time and a pound or more may be added to the birth weight.

Vomiting begins usually from the second to the fifth week; rarely it may begin as early as the tenth or twelfth day, or be delayed beyond the sixth week. Next in importance to the age of the infant at the time of vomiting, is the character of vomiting. It is not regurgitation, a condition common to many breast-fed infants when given too frequent or too bulky nursings. The vomiting of pyloric stenosis is large in amount. The time of occurrence, frequently during the act of nursing or shortly thereafter, is important. It is, or will become during the course of the disease, forcible and projectile, the contents of the stomach being sometimes driven across the bed or even across the room.

Vomiting takes place often and, especially in the later stages of the disease, with every act of nursing. In some cases one or more feedings will be retained throughout the day, and not infrequently the baby will vomit more

than it took at its last nursing. This means simply the regurgitation of a feeding, plus the contents of retention of the previous one, the bulk of which, in bad cases, may equal the amount in quantity of both feedings. After vomiting, the infant cries for more food, unless, from neglect of recognition, the disease has reduced vitality to such an extent that the infant is too weak to cry. A change of food for a day has been followed by abatement of symptoms, which is difficult to explain and tends to mislead the physician.

A very interesting case is under my care now, of a baby 6 months of age, with a history of having taken breast milk and nearly every preparatory food with a result that it has succeeded in merely keeping itself alive from the small amount of the many different foods which have passed through its stomach. If stenosis is complete, bowel movements are very scanty and what is passed is not feces but merely dark brown or green mucus. The presence of bile in the vomited matter is a strong indication against the existence of pyloric stenosis.

Other clinical signs and symptoms are those of progressive starvation. Some cases have a less pronounced course than others. In those in which retention by the infant of a part or all of occasional feedings occurs, fecal stools persist; emaciation is less rapid, and when obstruction is incomplete, recovery may occur after many weeks or months of miserable existence, without operation and without even the administration of the so-called medical treatment with atropin and thick cereal gruel feedings. In most cases, however, gradual and later, rapid signs of death occur as a result of lack of nutrition. Loss of weight of 3 or 4 ounces a day—later even a half-pound—takes place. Late in the disease the body is reduced to that of a living skeleton. There is always obstinate constipation. Stools, produced by stimulating enemata, are small, dark, and just before death resemble the tarry stools of meconium. Urine is scanty and skin dry because of lack of water retention.

In the most severe cases the symptoms increase with rather alarming rapidity. Death may occur after a period of 2 or 3 weeks from

onset of symptoms. In the milder cases, the weight remains stationary or fluctuates within narrow limits, peristaltic waves exist denoting obstruction, even with some food retention, and it will be several months before a gain in weight and disappearance of digestive signs show beginning of recovery. Even after apparent recovery without operation and with medical treatment, peristaltic waves may be discovered and a tumor felt until the close of the first year. Chief of the objective signs is the occurrence of visible waves of reversed gastric peristalsis. Under normal conditions a wave of peristalsis passes over the stomach once every 20 seconds, always toward the pylorus, but such contractions are invisible. When obstruction at the pyloric opening occurs, the waves become distinctly visible and are always present if searched for under favorable conditions. These are: A physician who is not in a hurry, a good light, a well exposed abdomen, a quiet baby, and a stomach which contains some food. An empty stomach will not display waves. The waves appear as spherical gas-like balls under the left border of the ribs. They pass slowly and regularly toward the right, usually above the line of the umbilicus but also below this line in cases of long standing with great gastric dilatation, and disappear under the right costal margin. Often one wave is succeeded quickly by another. Strong peristalsis is usually followed by projectile vomiting, which frequently occurs while the waves are being watched.

In examining the infant for reversed gastric peristalsis, it may be necessary to make several examinations of at least 15 to 20 minutes each, the best time being during the active nursing or shortly after. This important sign may be considered pathognomonic of hypertrophic stenosis; of almost equal importance is gastric retention. This sign is discovered by the withdrawal of what remains of a measured feeding 2 or 3 hours after nursing.

Of enormous importance, when present, is the pyloric tumor. Ability to palpate a tumor is largely the result of experience. It is possible that the tumor may vary in size, to some extent, as well as in apparent consistency, according to the amount of pylorospasm present.

The tumor is felt as a small movable body, the size of a peanut or small olive, an inch or more to the right of the umbilicus. A tumor may not be felt if it should lie beneath the right border of the ribs.

Duodenal bougies are sometimes passed for diagnostic purposes. It is thought best to discard the use of bismuth radiographic tests, because the bismuth increases the pyloric obstruction and cannot be seen in the act of passing the pylorus, interfering therefore with the best results of operation.

Among the arguments used against medical treatment of these cases is the sudden death which often occurs, almost invariably presenting the picture of thymus death, but this occurs in infants who have been operated upon as well as those who are medically treated.

Upon the hypothesis that the vegetative nervous system is at fault, the use of atropin presents itself at once as one of the rational therapeutic agents, since it paralyzes the vagus endings. Clinical experimentation with atropin and thick cereal feedings has shown remarkably consistent results, but the following factors are absolutely essential in attaining success: (1) An active preparation of atropin; (2) a renewal of this preparation before too great deterioration; (3) sufficient dosage.

The tolerance for milk, which is usually low in these infants, is at once materially increased after using atropin, so that a normal amount may be utilized; a condition quite different to that existing before the atropin was begun. None of the toxic symptoms are in the least dangerous and disappear promptly upon discontinuing the drug for a few doses. Hypertonic infants tolerate unusually large doses of atropin safely. Infants who cannot tolerate at least 1/2000 gr. 6 to 7 times daily, will probably not be benefited by the treatment.

The condition is much more common in males than in females, occurring in a proportion of 7 or 8 to 1.

For many years there were 2 methods of treatment. One was the so-called medical, consisting of stomach washing and careful feeding; the other, surgical, which comprised several procedures, such as divulsion, pyloroplasty and posterior gastro-enterostomy, the

latter being the operation mostly used for relief of the obstructed pylorus. Until quite recent years the mortality accompanying these operations was so high that medical treatment was the one in favor.

There are still some experienced pediatricians who favor prolonged medical treatment before the intervention of surgery. These cases, however, are placed within well equipped hospitals, where there is abundance of breast milk secured through resident wet-nurses, or where measured thick cereal gruel feedings and lavage may be carried out without difficulty, but such feeding is available to only a few infants in this or any community. We have had encouraging results from the feeding of thick farina mixtures in cases of pylorospasm. The preparation of such feedings must be accompanied by careful detail, and the results we have obtained warrant the trial of this method of feeding, at least in that group of cases in which operation is not immediately demanded because of the depleted state of the infant; it should not be used, however, in complete stenosis. The cereals made with rice flour are better protected colloids than those made with the coarser farina, and apparently it is by virtue of this colloidal quality that the thick feeding acts, inhibiting the pyloric reflexes.

In preparation of the formula, fat is kept low at first, and the milk is calculated as in any simple formula. Experience shows that 10% solution of the rice flour is best. The formula is prepared by mixing the water and milk, bringing it to a boil and adding the cereal, which is made into cream with a little cold water. This is boiled over the flame for 10-15 minutes and stirred constantly. The sugar is then added and the mixture boiled in a double boiler for 1 hour. For a thick gruel, 1 tablespoonful of cereal to each 5 oz. liquid is needed.

We have found it possible to feed this very easily to a baby by using the Hygeia nipple, the end of which has been slit with a very sharp knife. The Hygeia bottle containing the food is kept standing in a basin of hot water in order to keep it liquid, and it is then passed from the bottle into the open nipple

with a spoon. Children take it readily. It is well to add salt.

The operative treatment for stenosis has become the plan of election largely through the development, by Downes of New York, of the Rammstedt operation. As soon as a definite diagnosis of pyloric stenosis is made, the infant is prepared for operation. If the patient is dehydrated and in poor condition, interstitial and intravenous injections of 10% glucose are given. In addition, if the patient is in very poor condition, a transfusion of blood is administered. It may be necessary to delay operation for 1 or 2 days until the condition is improved by these means. Incision is made high up, so that after operation the liver will partly protect the wound from the dangers of hernia. The tumor is delivered through the wound and a longitudinal incision made in the bloodless area into the muscular coats and extended by blunt dissection down to the mucous layer. The pylorus is then replaced in the abdomen and the abdominal wound closed. Operation is in every case followed by a transfusion of 15 c.c. blood per pound of body weight. It is believed that this transfusion is a great factor in lowering the mortality rate, as many of these infants are dehydrated and in a toxic condition. The infant, on return to the ward, is placed on its right side. For an hour or two after operation the head of the bed is kept lowered to prevent aspiration of mucus into the larynx; this is absolutely necessary. Ten to 12 hours later the patient is placed in a semi-erect position, which tends to prevent regurgitation of food and permits the more easy escape of gas. As soon as the patient is placed in bed, hypodermoclysis of 120 c.c. normal saline is given. Dilute whiskey every few hours for the first 5 or 6 days has proved of great value. Transfusion in a few cases which have collapsed has been of material benefit. One and one-half hours after operation 10 c.c. water is given, and 1½ hr. later 10 c.c. breast milk; 2 hr. later 8 c.c. breast milk and 4 c.c. water are given. Breast milk is then given every 3 hours, alternated with water, and gradually increased in amount so that at the end of 48 hr. about 30 c.c. is being given at

a feeding with 4 c.c. water. The water is then discontinued and on each successive day the amount of milk is increased 5 c.c. at each feeding so that by the eighth day following operation the baby is taking 60 c.c. milk each time.

If vomiting persists, gastric lavage may be employed. One teaspoonful of castor oil is usually given 24 hr. after operation if there have been no stools. If there are more than 3 or 4 stools a day, protein milk should be substituted for 3 or 4 breast feedings. The wound is not disturbed for 4 or 5 days unless some special indication arises. The stitches are removed on the ninth or tenth day.

The operation is, perhaps, the least important factor in the mortality; condition of the infant at the time of operation is certainly the most important factor. The duration of symptoms prior to operation is probably the most important single factor affecting prognosis. When symptoms have lasted less than 4 weeks, the mortality is only one-third as great as when they have lasted 4 weeks longer. The mortality in artificially fed babies is more than 3 times that for the breast fed infants. In those weighing 7 lb. or less, the mortality is $3\frac{1}{2}$ times as great as in those weighing more than 7 lb. The mortality increases in direct proportion to the amount of weight lost previous to operation. The mortality for breast-fed infants who had vomited less than 4 weeks, and who had lost less than 20% of their best weight, is almost nil. The fatalities which occur are due to accidents, usually avoidable when the operation is done by a skillful surgeon.

The trend of thought of our leading pediatricians is that these cases should be divided in 2 classes: (1) cases of pure pyloric hyperplasia, in which the circular muscle is so hypertrophied, the pyloric passage so narrow, and the mucous membranes so folded that the stenosis is absolute; (2) cases in which the hypertrophy is also marked, but the pyloric canal is narrowed to a slight degree; obstruction here is attributable to irritative spasm of the hypertrophied pyloric sphincter, and patients suffering from this type of irritation,

under wise feeding and medical treatment, may recover without other treatment.

So it happens that now, after years of groping, we are possessed of 2 therapeutic measures, both of them effective; one as simple and harmless as a surgical procedure can be, the other a medical measure uncomplicated and harmless. With a clear conscience the medical man may advise either the Fredet operation or dietetic treatment with thick feeding and atropin, with assurance that a large proportion of cases will respond with complete restoration of digestive and nutritional function. For the stubborn cases there is still left the brilliantly successful operative method of Fredet which, if used early enough, ought to obtain 100% of cures.

CONGENITAL SYPHILIS*

Practical Methods of Prevention, Diagnosis and Treatment

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Syphilis is called congenital when it has been contracted by the fetus at any time during the pregnancy of the syphilitic mother. Syphilis is called hereditary when the speaker is careless in his speech. Like any other infectious disease, syphilis cannot be called hereditary in the sense that feeble-mindedness is, because the spirochete is a parasite which may enter but cannot become an integral part of the human cell. The spirochete reproduces itself independently of, and without any regard for, the rate or method of reproduction of the human cell. Luckily for the human race, the body cells set up a defense mechanism which interferes with the reproduction of the spirochetes, which in 5 years, more or less, may make the patient noninfectious, not only in ordinary contacts, but also in the relationship of mother to fetus. By the time the

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congenital syphilitic has reached the age of puberty, the infectiousness has become so greatly reduced that the disease is not transmitted to the children, or it is transmitted so rarely that the evidence of such transmission to the third generation is insufficient to convince the majority of syphilologists.

Congenital syphilis differs from acquired syphilis chiefly in that the damage in the former case is done by a massive infection at a formative stage of the individual, and is magnified during the growth of the child, just as a small mechanical scar in the infant may show as a gross defect in the adult. The principles of prevention, diagnosis and treatment are essentially the same in congenital as in acquired syphilis.

Prevention is chiefly a matter of preventing infectious contacts by early treatment before pregnancy; the diagnosis in most cases can be readily made by the Wassermann test, and treatment is essentially the same, with a necessary reduction in dosage.

The necessity for greater effort in preventing, diagnosing, and treating congenital syphilis is shown in the medical case reports sent during the year 1927 to the New Jersey State Department of Health. The total reported for syphilis for all ages was 5593. Of these, 115 were under 10 years of age, and therefore presumably cases of congenital syphilis, making the percentage of syphilis under 10 years of age only 2.05, or approximately one in 50 syphilitics. In Hazen's⁽¹⁾ experience, about 3% of all syphilitic patients seen in private practice are affected with the congenital form of lues, while in dispensary practice the figures run between 8 and 10%. In my private practice, I examine the whole family of each patient for syphilis and my records show the proportion of congenital syphilitics (under 10 years of age) to the total syphilitic population. In a small series of my last 100 cases I have excluded all patients referred to me for examination and treatment for congenital syphilis. The inclusion of those cases for all ages would give the exaggerated figure of 13% for the prevalence of congenital cases. The exclusion of all children referred to me for examination gave a corrected figure for con-

genital syphilis in a syphilitic population as only 5%. This 5% is 2.5 times the proportion found in the state records, suggesting that there would be at least 2.5 times as many cases of congenital syphilis discovered, if physicians took as much interest in congenital as in adult syphilis. These figures might be somewhat different in a larger series, but at least they show evidence of much neglect of the problem of diagnosis of congenital syphilis.

The possibility of preventive work through greater interest in congenital syphilis is shown by the case histories of some of my private patients in the larger unselected group.

The worst example of neglect I found in the family of a woman who was sent to me for examination because of gastric disturbances. She and her husband and 2 of the 3 children had, among other findings, very strongly positive Wassermann reactions. The oldest child had quite typical Hutchinson's teeth, with a negative Wassermann reaction. The mother said that the child as an infant had been treated in a hospital in Philadelphia for some months with a dirty salve (obviously mercurial ointment), which was rubbed into the body almost every day. But neither she nor her husband had been examined, nor told the diagnosis, nor had they been advised that any treatment was necessary. Proper treatment of the mother would have prevented congenital syphilis in the next 2 children.

Another case of neglect was the use by the family physician of the inefficient treatment by mouth. The mother and father received mercury pills before, during, and after 2 pregnancies, which resulted in the birth of 2 syphilitic children, who were also given mercury pills. All 4 members of this family had strongly positive Wassermann reactions when the daughter was sent to me, at the age of 12, with a severe interstitial keratitis. Needless to say, intravenous arsphenamin and intramuscular bismuth and oral iodides have stopped the active progress of the lesions. The patient was rapidly becoming blind under oral medication before being seen by the ophthalmologist. The treatment immediately given to the rest of the family is preventing

future congenital cases, ocular syphilis in the other child, and producing the other incalculable benefits of the modern therapy which should be administered to every syphilitic.

A third example of neglect was in a family where I saw the mother first in consultation. As I was leaving the house I saw the two children, and noting that the daughter had Hutchinson's teeth, suggested to the attending physician that it might be well to look after her also, and possibly the husband and the other child. A year later the husband was sent to me by another physician who had treated him before marriage with the usual oral treatment. The mother had discontinued treatment because of the painfulness resulting from poor technic, and the rest of the family had not been examined. The sickly daughter with Hutchinson's teeth and a strongly positive Wassermann reaction, became active and gained 30 lb. during the first year of treatment. The mother also improved under similar care. The son had a negative Wassermann and no evidence of syphilis. The father's nervousness and gummata of the elbow disappeared under treatment. The infection of the mother and the first child, and the disability of the father could all have been prevented, if the father's physician had given him modern treatment in the beginning or referred him to a competent syphilologist.

These examples of neglect to prevent, diagnose, or adequately treat congenital syphilis could be added to indefinitely from the records of any syphilologist or clinic where careful histories are taken and followed up with examination of the entire family.

PREVENTION

The prevention of congenital syphilis is a matter of finding all infected women who have not reached the menopause, and giving anti-syphilitic treatment to make and keep them noninfectious. A routine Wassermann on all men and women just before marriage would find most of the syphilis which is transmitted to the second generation but there would still remain hidden the infections acquired after marriage. Any scheme for a routine Wassermann before conception would be impractical

at present because there is no preparation made for the fertilization of the ovum; usually this event is a matter of luck, and frequently it is considered a misfortune. A Wassermann after conception, however, is routine in well conducted prenatal clinics at the time the patient first appears, but she usually comes in too late in pregnancy for the diagnosis of syphilis to be of great value in preventing serious damage to the fetus.

PREVALENCE OF SYPHILIS IN WOMEN AND OF CONGENITAL SYPHILIS

The prevalence of syphilis among pregnant women is shown by the figures of Williams⁽²⁾ for the Johns Hopkins Hospital, where the Wassermann is done routinely. He found a positive Wassermann in every sixth black woman and every fortieth white woman. The necessity for routine test to find so much syphilis is quite evident. I find the prevalence of syphilis in a consecutive series of 200 white private obstetrical hospital patients in Camden, New Jersey, to be one in 50, as shown by strongly positive Wassermann tests. The value of the Wassermann among wealthy private patients, with possibly only one case of syphilis in 100, is less evident. Economists may argue that there is too little syphilis among the rich to make the Wassermann worth while as routine in private practice. I believe, however, that it is worth while to do even 100 Wassermann tests to find one infected pregnant woman. However, that is an academic question with most of us, as not all of our patients are rich.

A practical method for finding adult cases is the routine Wassermann taken on all patients, as is customary in our better hospitals. Thorough treatment of those found infected will prevent much congenital syphilis. The private patients should be informed by their physician of their infection and the ward patients referred to the syphilis clinic for this advice. Every infected adult should be fully informed about syphilis so that pregnancy can be avoided until 6 months of thorough treatment shall have rendered the patient noninfectious. If pregnancy does occur at the end of 6 months, it is more important than ever to continue with the same treatment.

The carefully made Wassermann test is more sensitive than the Kahn or Kline flocculation test, but is somewhat more trouble to perform. Any of these tests is sufficient to rule out syphilis in the great majority of cases. Even the patients with weakly positive Wassermann reactions rarely produce syphilitic children, as the weakly positive reaction, except in the first few weeks of the disease, is usually a sign that with the passage of time the infectiousness has practically disappeared. Because of the possibility of human errors, the diagnosis of syphilis made on the evidence of a single positive Wassermann should always be confirmed by another Wassermann. It has been found that the Wassermann rarely gives false positives in pregnancy. These false reactions are usually fleeting in character, or only weakly positive.

In Stillians'⁽³⁾ opinion, the Wassermann reaction has almost the same significance in pregnant as in nonpregnant women. He states that probably much less than 2.5% of the positive Wassermanns were false. It is claimed by some that these doubtful reactions are syphilitic signs which have been intensified by pregnancy; by others that they are present with any good sensitive technic and should be ignored; by still others that they are a sign of imperfect technic. Doubtful Wassermanns should be repeated several times and a decision made after consideration of all the factors in each individual case. The simplicity of getting the specimen of blood and its economy through the free service in the state and many county and city laboratories, make the blood test practical for routine use. These factors—necessity, economy and simplicity—have made the Wassermann at the first examination of every pregnant woman routine in all thorough, efficient, prenatal clinics. Treatment should be begun as soon as the Wassermann is found strongly positive. If tests taken during the next 2 weeks indicate that the patient is not syphilitic, no particular harm will have been done. On the other hand, if, as is usual, further tests prove that the patient is infected, the antisyphilitic treatment already given will be of greater benefit than more intensive therapy administered later. If the

mother has only a weakly positive reaction, treatment may be delayed a week or two while the diagnosis is being made. A woman with a weakly positive reaction is not likely to be infectious unless she has primary syphilis, and then the diagnosis may be confirmed by the dark-field examination. Because so many syphilitics have abortions, miscarriages, stillbirths, and healthy children, the incidence of congenital syphilis is not so great as that of acquired syphilis in women.

The prevalence of congenital syphilis in Great Britain has been estimated by Douglas White⁽⁴⁾ to be 1-3% of the total births. Stokes⁽⁵⁾ estimates the incidence of syphilis in the child population of the United States as from 3-5%.

The most important diagnostic measure for congenital syphilis is a well conducted Wasserman test. Leonard Findlay⁽⁶⁾ reports an analysis of 1000 Wassermann reactions in congenital syphilis in which the clinical and serologic findings were compared. Of the cases clinically definitely syphilitic the reaction was positive in 98%. A routine Wassermann on all children with subacute or chronic illness of obscure origin is a common substitute in ordinary practice for the ideal measure adopted in many hospitals, a routine Wassermann on *all* sick children. A simple procedure for infants is to take a routine Wassermann on the mothers, as a negative result on a mother will usually exclude syphilis in the infant. In children over 2 years of age the veins are usually large enough to present no difficulty in getting the specimen of blood, and examination of the blood of these older children gives a more reliable result than examination of the mother's blood; in doubtful cases, however, the mother's blood also should be examined. The passage of 10 or more years in rare cases, or previous treatment in the majority of cases, tends to make the Wassermann on either mother or child less reliable.

Some clinical signs, such as Hutchinson's teeth, interstitial keratitis and marked saddle nose, are practically pathognomonic of congenital syphilis. In the hands of an expert, suggestive evidence, such as a skin rash,

snuffles, wasting, iritis, otitis media, deafness, chondro-epiphysitis, jaundice, convulsive seizures, enlargement of the lymph nodes or spleen, periostitis, osteomyelitis, history of miscarriages in the mother, or signs of history of syphilis in either parent, may point the way to confirmatory physical findings in the child. The general practitioner is better advised if he does not make a diagnosis without a positive Wassermann unless he finds pathognomonic signs or overwhelming clinical evidence of syphilis. Even then he should confirm his diagnosis with a Wassermann on both the child and mother. A second Wassermann should be taken, even in the presence of other evidence, because of the possibility of error. Treatment need not be delayed until a second test is obtained as many weeks or usually months or years of treatment are necessary to change the Wassermann to a negative. The longer the disease has been present, the more treatment it is likely to take to produce a negative Wassermann.

TREATMENT OF THE PREGNANT WOMAN

Treatment of the infected pregnant woman is usually classed as a preventive measure. Ordinarily, it is early treatment of the already infected fetus, because the disease commonly remains undiagnosed until a routine Wassermann is taken during the last month of pregnancy. This so-called preventive measure seems very successful, especially when many of these mothers have been infected for more than 5 years; many of these old cases are in reality noninfectious, and the infants would be healthy without prenatal treatment.

Occasionally it is suggested that apparently uninfected wives of syphilitic husbands be treated when pregnant to prevent the very remote possibility of congenital syphilis. If these husbands are put under efficient treatment before their wives become pregnant and the wives have no evidence of syphilis, including 3 negative Wassermann reactions during a period of 3 months observation, there is less chance of unrecognized syphilis than there is in the great mass of pregnant women who never had a Wassermann test. Logically, if treatment is prescribed routinely

for the apparently uninfected wives of syphilitic husbands, it should be prescribed with greater necessity for the great mass of pregnant women whose blood has not been examined, but in whom syphilis is found, depending on the class in 1-15% of cases. Of course, because of the strong probability of freedom from infection in both cases, both propositions are absurd—the necessarily intensive and prolonged treatment should not be given unless there is a strong probability of syphilis.

It should be the rule to give any woman found to be infected immediate, thorough, vigorous and continuous treatment for at least the first year, whether she is pregnant or not. This rule relieves us of any uncertainty until the birth of the child. The treatment of the mother should be continued, but it may be desirable to give no further treatment to the child if it is probable that the child is uninfected. An infected or probably infected child should also receive thorough treatment, as the mother's milk contains too small an amount of antisiphilitic drugs to have any great therapeutic value.

TREATMENT OF THE INFANT

The proper method of handling these cases at present is a matter of opinion, as we have not sufficient statistics of the results of various methods to be able to choose the best. It is my opinion that the children of apparently noninfectious syphilitic mothers should not receive treatment after birth unless they have evidence of infection. As it is difficult or impossible to determine when an untreated syphilitic is noninfectious, an arbitrary standard of the age of the infection may be taken. An untreated infection of less than 3 years' duration should be regarded as almost certain to be communicated to the child. An infection of more than 3 years' standing may be noninfectious, the chances of infection gradually diminishing with the age of the infection. An infection of over 5 years' duration usually is not transmitted to the child; the frequency of transmission after the fifth year is given by Belding⁽⁷⁾ as 27%.

Even if it can be determined that the infection is older than 3 years, the pregnant

mother should be put under immediate treatment for her own sake. After birth the child should be given no treatment, but should be watched for evidence of infection; a Wassermann should be taken at the end of one week, 2 months, 6 months, a year, and 2 years. If all these are negative, the child is probably nonsyphilitic. These children of treated, apparently noninfectious, mothers may or may not be infected, but have had treatment before birth so that a negative Wassermann is not so significant as in the untreated child. A weakly positive Wassermann during the first few weeks of life is not generally accepted as proof of syphilis in the child, because of the possibility of laboratory errors, and, as suggested by Boas, of the mechanical transmission of the Wassermann substance from the mother to the blood of the child without transmission of any living microorganisms. In doubtful cases the spinal fluid also should be examined. A strongly positive Wassermann, however, is strong evidence for syphilis, and the child should be intensively treated for the prescribed period unless the Wassermann is found negative or weakly positive in a week or two. A sudden drop from strongly positive to weakly positive or negative in any case of congenital syphilis should cause doubt as to the accuracy of the first result. Further tests and careful study are necessary before continuing the antisyphilitic treatment.

If the apparent duration of the infection of the pregnant woman is for a period of less than 3 years, whether the child should receive treatment or not after delivery, and the amount of treatment necessary, are chiefly dependent upon the amount of treatment the mother already has received. The following arbitrary standard is suggested until compiled statistical evidence gives us better standards.

If treatment has been continuous for the whole 9 months of pregnancy, we are assured of a nonsyphilitic child; the infant, therefore, needs no treatment. If the mother has had no treatment during pregnancy, and has had untreated syphilis for not more than 3 years, it is practically certain that the infant will be

syphilitic, and the syphilitic child should be given 2 years of continuous treatment.

It is difficult to decide upon the continuation of treatment of the syphilitic child who has been partially treated before birth. If the mother has had less than 2 months of treatment during pregnancy, this insignificant amount should be disregarded in deciding upon the amount needed for the syphilitic child after delivery, and the full 2 years should be given. In any case of doubt as to procedure, it is always conservative to give the congenitally syphilitic infant 2 years of treatment. If the pregnant woman has been intensively treated for 5 months, then this 5 months' treatment of the fetus, combined with continuous treatment, during the first year of the infant's life, should be considered sufficient for a probable cure. This continuation year of treatment of the infant, after 5 months treatment of the fetus, may be too stringent, as further study may show that most of such cases are cured before birth. If the pregnant woman has been treated for 6 months or more, she probably will be delivered of a healthy child. This apparently healthy child should not be treated after birth but should have occasional examinations until 2 years of age before being pronounced cured.

In addition to the cases diagnosed before delivery, there are the cases missed until the child is 1, 2, 5, 10 or 15 years old. The treatment of these children will be prolonged according to the rule that the longer syphilis has been present untreated the longer will be the course of treatment necessary to cure. A good rule for treatment of congenital syphilis diagnosed after birth is to give a minimum course of 2 years, and to add a year after a negative Wassermann has been obtained. If the patient has not been treated before the age of 5, 3 or more years of treatment will be found necessary for a cure. Those who have reached the age of 15 or more, as well as those with acquired syphilis of the same number of years' duration of infection, will receive 3 to 5 years of treatment before a negative Wassermann is to be expected, if the Wassermann is of proper sensitivity. Of

course they should receive at least one more year of treatment after the Wassermann has become and remains negative.

A congenital syphilitic child has a syphilitic mother who must be brought in for treatment, and a father who also may have syphilis and should be examined.

DRUGS AND DOSAGE

I believe that we should treat congenital syphilis essentially as we do acquired syphilis except in the matter of dosage. In beginning treatment, especially in early syphilis, it is often well to get the disease under control rapidly by injecting both sulpharsphenamin and bismuth at each of the first 3 visits, which may be made during a period of 8 or 9 days. After this intensive treatment, the usual weekly routine may be continued. The routine I use for each year is like that for adults, alternating 5 weeks of sulpharsphenamin with 8 weeks of bismuth, giving 4 of each series of injections in a year.

Sylvester⁽⁵⁾ has obtained apparent cures in early cases of congenital syphilis with a much shorter course of treatment than I am advising. He gave sulpharsphenamin in only 2 courses, of 12 injections each, with a month's rest and a Wassermann between the courses. His dosage was large, 10 to 20 mg. per pound of body weight.

For intensive treatment in the beginning, the sulpharsphenamin and bismuth may be injected together into the deep subcutaneous tissues. Much discomfort to the infant can be avoided by using a 1 inch 22 or 23 gauge needle, and keeping the total bulk of the injected fluid at about 0.5 c.c. or less. My usual plan, because of the slowness of absorption of the bismuth, is to give 3 weekly doses of sulpharsphenamin, 2 weekly doses of a mixture of sulpharsphenamin and bismuth, 11 weekly doses of bismuth, no injections for 2 weeks, and then to begin all over again, giving this cycle 4 times a year.

The sulpharsphenamin may be given wherever there is loose, deep subcutaneous tissue, such as over the buttocks, near the angle of the scapula, or into the anterior abdominal wall. The bismuth may be given in similar

places, with a preference for the buttocks. The skin should be pulled up like a tent and the needle inserted well under the skin, but not into the muscle.

The dosage is, of course, smaller for the child than for the adult, but somewhat larger in proportion to the body weight. For a baby of approximately 3 to 5 kilos (about 6-10 lb.) until 2 weeks old, the dose of sulpharsphenamin would be 0.05 gm. (0.3 gr.) each week. This may be increased slightly according to gain in weight and should reach at least 0.15 gm. by the end of the first year. Small and young animals usually tolerate larger doses than do older ones, so that for the first 2 years the dosage may be as much as 20 mg. per kilo (10 mg. per pound). The usual weekly dose of bismuth subsalicylate should not be increased the first 6 months much above 0.02 gm. (approximately 0.01 gm. bismuth metal), because it is cumulative in its action.

Mercurial inunctions may be substituted for bismuth, or combined with other treatment the first week for rapid action. A piece of mercurial ointment, 30 or 50%, about the size of a pea (0.5 gm.), may be rubbed into the abdomen daily. One week of mercurial inunctions may be substituted for one injection of bismuth, but probably the bismuth is the more efficacious. The mercurial inunctions should follow the bismuth and precede the sulpharsphenamin. It is well to give an interval of one week without mercury to allow much of the heavy metal to be excreted before the sulpharsphenamin is used.

I believe the iodides, in a dosage of 1-2 drops of 50% sodium iodide solution, are useful for congenital syphilis. In the treatment of older children the iodides should be given routinely. My custom is to give the iodides for the first 15 days of each month. This drug should be stopped whenever it causes gastric disturbance.

The dose of 0.1 gm. sulpharsphenamin may be increased cautiously after the first year to 0.2 gm. After the eighth year, with a body weight of 24 kilos (53 lb.), the dosage should not be increased much beyond 0.1 gm. sulpharsphenamin per 10 kilos (22 lb.) body weight. The bismuth subsalicylate may be

used in one-quarter to one-third the dosage of the sulpharsphenamin, but the urine should be watched for albumin and casts to know when to give the kidneys a rest from the irritation of bismuth or mercury.

The tendency should be to lower the calculated dose of bismuth after the first 6

months of treatment. Albumin and casts and general symptoms of overdosage must be carefully watched for and the dosage of drugs reduced accordingly. I use the following schedule of dosage, but the upper limits must be observed with great caution, especially after the first 6 months of treatment.

SCHEDULE OF WEEKLY DOSAGE

Age	Weight Over	Sulpharsphenamin	Bismuth Subsali-cylate
Under 2 weeks	3 K (6.6 lb.)	0.05 to 0.10 (.13)	0.02 to 0.03
	4 K (8.8 lb.)	0.07 to 0.12 (.17)	0.02 to 0.04
2 to 12 weeks	5 K (11 lb.)	0.10 to 0.15 (.22)	0.02 to 0.04
	3 to 6 months	6 K (13.2 lb.)	0.12 to 0.2
6 mo. to 1 yr.	8 K (17.6 lb.)	0.15 to 0.2	0.02 to 0.05
	10 K (22 lb.)	0.18 to 0.25	0.03 to 0.06
1 to 2 years	12 K (26.4 lb.)	0.2 to 0.28	0.04 to 0.08
2 to 3 years	14 K (30.8 lb.)	0.25 to 0.3	0.06 to 0.10
Intravenous Neo-arsphenamin			
4 years	16 K (35.2 lb.)	0.2 to 0.3	0.1
8 years	24 K (53 lb.)	0.3 to 0.45	0.15
12 to 15 years	34-50 K (75-100 lb.)	0.45 to 0.6	0.2

SUMMARY

The routine Wassermann with thorough treatment for all syphilitics is our greatest preventive measure against congenital syphilis.

The family physician should prevent congenital syphilis by modern treatment for all syphilitics, instead of allowing the disease to develop by giving no treatment, or only mercury by mouth.

The syphilitic woman who has been thoroughly treated during the entire period of pregnancy is assured of having a nonsyphilitic child.

Treatment of the syphilitic pregnant woman, as well as of the congenital syphilitic, is essentially the same as that of the ordinary syphilitic, by means of neo-arsphenamin or sulpharsphenamin, bismuth, mercury, and iodides.

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DISCUSSION

Dr. D. J. M. Miller (Atlantic City): Dr. Casselman has covered the main points so thoroughly that my remarks will be in the nature more of emphasis on certain points than of presenting anything at all new.

Early recognition of congenital syphilis is extremely essential if we are to get the best results from treatment and control the spread of the disease. There are too many cases unrecognized or neglected; the proportion reported to the State Department of Health of one congenital case in 50 total cases is obviously too low. Dr. Casselman found in his private practice that the proportion is one congenital case to 20 syphilitic adults. Even this proportion of one living syphilitic child to 20 adults seems low, but we must remember that many syphilitic pregnancies have resulted in abortions, miscarriages, still-births and early deaths of the children.

From the fact that the proportion is at least one syphilitic child to 20 syphilitic adults, and that there were 5593 adults reported for 1927, it follows that there should have been 280, or more than double the number (115) of the congenital syphilitics who were reported. It is evident, therefore, that the diagnosis and treatment of congenital syphilis is very much neglected.

If the Wassermann reaction were used more frequently, not only in those showing classical signs of the disease, but also in those infants and children who simply exhibit wasting, long standing

and obscure chronic disease, failure to thrive, or atypical obstinate rashes, many unexpected cases would be discovered. With a little more interest in the diagnosis of congenital syphilis through the assistance of the Wassermann in the child or its mother, the number of discovered congenital cases would be enormously increased.

I saw a child some years ago with what appeared to be an ordinary malaria. It had been an apparently healthy child of apparently healthy parents. Failure to improve under ordinary treatment showed the necessity for more accurate diagnosis. The Wassermanns on the mother and child were positive, and the child promptly recovered under antisymphilitic treatment.

Sometimes one Wassermann is insufficient. It is a good idea to check a child's negative or positive with the mother's blood. Dr. Casselman's suggestion is a good one, that it is often a simple matter to get a specimen of blood from the mother even though we may hesitate to disturb the young infant or spend so much energy in getting a specimen of its blood. Usually the mother's blood is as satisfactory in excluding syphilis as the child's. But the mother may be syphilitic and the child healthy, so a positive test in the mother must be followed with further investigation of the child. In all very doubtful cases, there ought to be 2, 3, or even 4 tests, with other data, before we come to a definite conclusion as to the absence of syphilis.

I am quite in accord with Dr. Casselman's position that the most efficacious way to prevent and control congenital syphilis is the discovery of the disease before marriage or at least before conception, and the carrying out of intensive early treatment of the pregnant mother continued throughout pregnancy.

We must remember that the syphilitic infant, when born alive, may have been infected only a few weeks, but usually has been infected for many months, and that all its organs are swarming with spirochetes, which makes the prognosis bad as to absolute cure with no residual damage to the organs. Most children are not even relieved of infection; a few treatments cause marked improvement and the child disappears uncured, to relapse later. The discovery of lues, therefore, in a prospectively pregnant woman or early in pregnancy, is of paramount importance, if the offspring is to be born disease-free. The use of the Wassermann test in all pregnant women is now being practiced, as Dr. Casselman says, in many hospitals, with a distinct reduction of congenital cases in subsequent pregnancies. I must confess to seeing great difficulties in the way of carrying out such a practice on private patients.

The treatment of congenital syphilis at present seldom results in a complete cure, chiefly because the patient seldom continues long enough. In the main, I agree with Dr. Casselman's suggestions as to treatment, but my reliance is almost entirely on arsenical preparations. It is said that the arsenicals are spirocheticidal, while bismuth and mercury are chiefly inhibitory. I think the arsenicals are the ideal treatment, even in the youngest infants. I have used sulpharsphenamin almost entirely in my few cases, because of its ease of administration, its comparative painlessness, and the rapidity with which it appears to bring about disappearance of skin and other lesions; apparently just as rapidly as neo-arsphenamin and the neutralized arsphenamin. I prefer it, also, in older children for the same reason. I am inclined to follow Sylvester's method.

I use doses of 10-20 mg. in 10% solution, per

pound of body weight (20-40 mg. per kilogram) for 2 courses of 12 injections, with a month's rest, and a Wassermann during the rest period. If this Wassermann is negative, I give no further treatment after the second course; if positive, I give a third course after the second. I believe Dr. Casselman's practice of using bismuth alternately or simultaneously at frequent intervals is good. I myself do not use bismuth in young infants. In infants critically ill, arsenic is not advisable; the mercurials should be used instead.

Dr. Casselman has not said anything about contraindications to the use of arsenic. It should not be used in very delicate children, with any acute infection, or in high fever.

Dr. Casselman: Dr. Miller mentions the infrequency of diagnosis. I can also emphasize the infrequency of treatment in congenital syphilis. I thought it would be interesting to find out what had been done in the state on all cases reported to the State Department of Health. We sent out questionnaires and received replies. Most of the patients had received one dose of some sort of arsphenamin; about 3 visits on the average were made to the physician and then most of the patients disappeared. Usually little or nothing was done about the parents; there was no prevention of future cases.

I should like to say a few words about obtaining a routine Wassermann in cases of private patients. I find no difficulty. It is mostly in the minds of the physicians. A few years ago, on becoming connected with a hospital, I urged that a routine Wassermann be done on everybody in the hospital. It was first done in the wards, then extended a little further, and gradually kept on spreading. Finally I got the staff to agree that a routine Wassermann should be done on all patients except those individually exempted by their physicians. Of course, it wasn't long before it was done on all patients. In fact, physicians began to specify that they really wanted a Wassermann done on certain private patients to avoid any possible slip in routine. Now it is done as routine on all patients, and we have had no objections from private patients. There are occasional objections when a physician is rather clumsy in his technic in entering a vein, but if he makes no more than 3 stabs in his attempt, usually the patient makes no fuss. (Laughter.)

Sulpharsphenamin, without bismuth or mercury, is probably reliable if the dose is large. I am now using and recommending almost twice as large a dose of sulpharsphenamin in children as I formerly did. I find, as did others before me, that children tolerate enormous doses as compared to the amounts used per kilo body weight in adults. Dr. Sylvester apparently has proved it to have a curative effect if used in large doses in the early cases of congenital syphilis. Probably this curative effect is related to the youth of the tissues, for when it is used alone it is not a reliable method of treating adults. I started an experiment about 5 years ago to find out if sulpharsphenamin was as effective as neo-arsphenamin. I remember one man whom I placed on sulpharsphenamin alone. He had a 4 weeks old chancre which had been cauterized with silver nitrate but showed plenty of Treponemata. Wassermann was negative to plain and positive to cholesterolized antigens. The spirochetes disappeared from the sore in 24 hours after 0.3 gm. sulpharsphenamin, but after 17 doses of sulpharsphenamin in 5 months the Wassermann was strongly positive to all antigens and the man began to develop signs of neurosyphilis. I dropped the experiment in that patient and changed to

routine treatment with neo-arsphenamin, bismuth, and mercury, but it took me 3 years to cure him instead of the usual one year of treatment necessary in primary syphilis. That was a pretty poor record. I finally gave up these experiments of the comparative value of sulpharsphenamin and neo-arsphenamin when used without any bismuth or mercury, because I did not consider this apparently inadequate treatment fair to the patients.

I do not believe in the use of arsenicals alone in adults, or in too much dependence on arsenic. If I could use only one drug, I would prefer bismuth, but I would hate to depend on any single one of the three.

I didn't speak of the contraindications to treatment because they usually are not absolute, and in children rarely exist. I remember the case of a little child brought to me after being diagnosed by a physician in Philadelphia. It was a nephritic, puny little infant. I was almost afraid to give it anything which might be blamed for its death in the next day or two. I thought the possible loss to the world, if the treatment might actually endanger the child's life, to be negligible. I began treatment with bismuth, mercury, and arsphenamin simultaneously and in large doses. The case cleared up wonderfully and the patient gained rapidly for 6 months. Then the girl's mother induced her spoiled child to desert her nonsyphilitic husband, and abandon further treatment. The child, I hear, is doing well in spite of this neglect.

I do not find physicians giving antisyphilitic treatment too freely in the face of possible contraindications. They are more inclined to give too little treatment.

DIAGNOSIS AND TREATMENT OF MAXILLARY SINUSITIS*

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If it were not for the fact that the writer believes that the present conception of the mechanism of antrum drainage is erroneous he would feel apologetic in offering a paper on so hackneyed a theme.

So far as can be learned from modern textbooks on the accessory sinuses, the maxillary sinus will evacuate its contents only if the hiatus maxillaris is in a dependent position, or if the cavity becomes so full that positive pressure within it forces the fluid out through the normal ostium. The writer's views are not in accord with this belief because he has been able to demonstrate that it is possible to

insert a Lichwitz needle, have the patient blow his nose, in the classical fashion, and force air back through the needle with sufficient pressure to move a considerable body of water, even carrying with it at the same time the piston of a 6 oz. metal ear syringe. In the paper of Proetz, entitled "The Physics of Sinus Drainage", no allowance is made for this phenomenon. It is also possible for a patient, if the normal ostium be patulous, to evacuate fluid of the consistency of moderately thick pus into the corresponding nasal cavity, if the foregoing experiment be repeated. If this be true—and the writer believes that it is true—it should have great prognostic and therapeutic significance, because a patient may blow his nose very vigorously, thus completely evacuating the contents of a diseased antrum, particularly if an accessory ostium be present, and preventing a positive finding on lavage. For this reason he should be required to sit with head erect and instructed not to blow his nose for at least an hour before the examination is made, if one is to draw correct conclusions from the washings of antrum puncture and lavage.

From a prognostic standpoint it is reasonable to believe that a given case of suppurative antrum disease with a patulous hiatus or accessory ostium has a better chance for speedy recovery than where the reverse condition pertains. It seems also, since the maxillary is the largest sinus, the one most frequently infected and (if personal experience is any criterion) one in which the diagnosis is quite frequently overlooked, that more attention should be paid to it. The mere finding of pus in the maxillary sinus means very little from the therapeutic standpoint unless at the same time a careful study is made of the bacteriologic and pathologic changes which have taken place in the mucous membrane lining the walls of the cavity. Certain types of organisms, such as pneumococcus, *Streptococcus viridans*, and *Streptococcus hemolyticus*, when associated with antrum disease, produce changes which are characteristic, and these changes have a great bearing on the surgical therapeutics and on prognosis. Certainly the presence or absence of a patulous hiatus maxillaris or

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accessory ostium has a great deal to do with prognosis and treatment.

I take it for granted that all rhinologists are familiar with and use all of the classical diagnostic procedures, including the antroscope, x-rays and so forth. One physical change characteristic of most chronic antrums, which seems to have had little attention, is the alteration which takes place in the inferior turbinate of the affected side; i. e., the intractable turgescence and bluish appearance of the mucous membrane.

It is the custom of the writer, following the dictates of Skillern, to irrigate the antrums in every case presenting nasal symptoms which have lasted any length of time or which are characterized by markedly profuse discharge; and he does not hesitate to remove a button of bone and mucous membrane from the lateral antrum wall, beneath the inferior turbinate, if the case persists for longer than 3 or 4 weeks. This procedure serves 2 purposes: (1) It gives a chance to study the condition of the antral mucous membrane in that area, and (2) permits insertion of a nasopharyngoscope for the purpose of studying the cavity walls. Recent papers by Emerson have contributed a very great deal to the knowledge of antrum pathology in vitro.

Before touching upon treatment it may be wise to mention that needle puncture is not entirely free from danger. In saying this the writer knows whereof he speaks because he has had a death follow needle puncture in a patient whose antrums he had washed many times. Since this accident he has tried to demonstrate by suction that the needle is clear before attempting to force air into the antrum. In the event that it is not possible to get a proper response by this method, one can try forcing water through under light pressure. If it is not possible to get water through it is better to wait a day or two and then try again.

I have not touched on any of the ordinary diagnostic procedures, such as transillumination and x-rays, because after you have demonstrated a shadow in the antrum you don't know very much more about it than you

did before, and the same thing is true of needle puncture. If you find a shadow in the antrum, it tells you there must be something the matter with it, but it does not tell you what it is. Sometimes a roentgenogram will demonstrate a cyst or marked pathologic change in the antromucous membrane, but that is of very little value because it does not tell you what to do with it, and in the end, in order to find out what is in the antrum, you have to look at it with an antroscope or some similar instrument.

TREATMENT

Treatment of course varies with the individual case and is dependent on the anatomic configuration of the nose, changes within the antrum, character of infection, coöperation of the patient, corollary symptoms, age, and chronicity of the disease process. Of one thing the writer is almost convinced and that is that suction is productive of a great deal of harm and is rarely, if ever, beneficial. I say that because I have filled up an antrum with a mercurochrome solution and put on 5-15 lb. negative pressure—15 lb. negative pressure is more than should ever be used on anybody's nose—and it has been impossible to get that same solution out through the nose. I had this same patient in whom the suction was tried without any result, blow his nose that way and fill it full of mercurochrome solution. If a person cannot do that himself, the suction will not do it, and if he can do it himself, he does not need the suction. Certainly suction cannot benefit a case where the ostii are closed, and where they are open it is unnecessary.

In acute and subacute cases with patulous ostii, lavage every second day, with infraction of the middle turbinate inward and an autogenous vaccine prepared after "Fenton's method", usually suffices. I call this Fenton's method because he is the nose and throat man who has done the most with it, but as a matter of fact it has been contributed to by a number of men, and I do not know who is actually responsible for this method. Where symptoms persist, a small opening under the inferior turbinate and painting with silver

solution (10%) every second or third day may clear them up.

Where there are marked changes in the mucous membranes, the patient may have to be operated upon, radically, but many such patients get a great deal of relief from the milder measures outlined above. In a case that fails to yield, the writer endeavors to inspect the cavity carefully with the nasopharyngoscope and if polyps are present to remove them by curving suitably a small, sharp, flexible curet and curetting them out, paying particular attention to the region in the neighborhood of the hiatus maxillaris. Where all milder measures fail one must, naturally, resort to radical operation but all patients are in much better shape for a radical operation if they have had drainage for a longer or shorter period beforehand through a small opening under the turbinate. I think this serves also, if you have a small opening underneath the inferior turbinate into the nose; it can be enlarged by the Caldwell-Luc operation as much as is desirable, and you have not done the patient any damage, possibly you have done him some good, if you are able to find the condition of the sinus and, through that discovery, avoid his having a radical operation.

DISCUSSION

Dr. Norton L. Wilson (Elizabeth): Mr. Chairman, I think this is an important subject and should not go by without some comment. In the main I agree with what the doctor says, first as to transillumination. If I transilluminate the sinus and find it perfectly clear, I feel pretty well satisfied in my mind that there is no trouble of long standing. If I transilluminate a sinus and find it dark, I go further. To my mind, the darkness which you get in transillumination is due to diseased mucous membrane in the sinus, because I have filled the sinus with a liquid of about the same specific gravity as pus, and I have gotten perfect transillumination; I feel, therefore, that the shadow is really due to a thickening, or to diseased condition of the mucous membrane.

Now as to suction. If you put on a suction apparatus and keep it there, we know physically you cannot empty that sinus, but if you put on your suction apparatus, let it suck for a couple of seconds and then pull it out, the air rushes in, just as Dr. McGivern says, in the blowing of the nose

you have created a vacuum, the air rushes in and I believe forces out the fluid. You cannot always entirely empty the sinus, but you can do a lot by suction if properly used.

Dr. Henry C. Barkhorn (Newark): Mr. Chairman, I was particularly pleased to hear Dr. McGivern's paper because to me he brought out something entirely new, which I consider an outstanding feature. This stunt of inserting a Lichwitz needle, attaching a tube to it, putting it in a glass of water, then blowing your nose and getting bubbles is something which is new and should be adequately emphasized.

When I had a pneumococcic infection of my own antrum they tried to wash it and the procedure was very painful. Then they aspirated it and emptied it, and then they washed it and emptied it.

Another thing I find helpful in estimating the cubic capacity of the antrum that we subconsciously do, is to judge how much fluid goes in when we begin to wash and then judge how much fluid runs out when we cease washing; we then get an idea, depending upon the configuration, as to how big the antrum is and how much cubic space in the antrum is taken up by polypi, abscesses or other abnormalities. There are distinct abscesses of the mucous membrane of the antrum without an empyema, and I think these are the cases that lead to the chronic arthritides and perhaps even to arthritis deformans.

I enjoyed the doctor's paper tremendously and feel that he has made a real contribution to antral pathology and diagnosis.

Dr. A. B. Spiegelglass (Hackensack): I firmly believe in using suction for sinus infections. My method is as follows: First to shrink the mucous membrane of the nose by applying cocaine and ephedrin, then using negative pressure. In order to get the best possible results from suction it is essential that one has the proper nasal tip. Then having the proper tip one should apply it properly. To do this one should see that the tip is inserted so that it does not touch the tissues on either side of the nostril.

In some cases where I feel that milder suction should be tried I use the Lore method (a combination of suction and irrigation).

I have used these methods for a number of years and find them extremely satisfactory in curing 75% of cases without operation.

Dr. Harry V. Hubbard (Plainfield): Mr. Chairman, I have enjoyed this paper very much. The matter of diagnosis of the sinuses I think is a point that we should all lay great stress on. It is sometimes very difficult. Transillumination helps, and we go on to x-ray and to washing or suction, or whatever you attempt, and after you come to the end, if you will just wash the sinus out once, most of the trouble will be revealed.

There are cases, as the doctor says, where there is very, very little to wash out, and even a culture will not determine much.

I want to say one thing in regard to suction. Years ago I tried to establish in my mind the value of suction and I have to differ with the gentleman who has previously spoken. I don't think it is worth a cent and I believe, further than that, that it does harm. It injures the mucous membrane of the entire nose, congests the whole affair and doesn't accomplish a thing. You may get some little discharge from it, but you cannot clean the sinus with it. Furthermore, the statement is

1. Proetz: Physics of Sinus Drainage, Annals of Otol., Rhinol., & Laryon., March, 1927.

2. Emerson: Degenerative Changes in the Lining Mucous Membrane of Maxillary Sinuses and Their Relation to Systemic Infection, *ibid*, March, 1923.

made that it helps. Many cases will clear up if you don't touch them at all, although a few chronic affairs may result, but many cases will get well if you don't do a thing.

It has become my growing practice and method to wash the sinuses. I wash them for diagnosis and, just as proof that we get results, let me say that only a few days ago I washed 10 in one day, only one of which was found to be without pus. So that I do believe there are many more infections and more pus in these sinuses than has been expected, and the more we investigate, the more certainly we find that just washing clears practically all of them up. There are a few chronic ones that cannot be cured by this method but the majority of cases will yield to washing if carried out once in 3 days, or twice a week, and continued for some length of time.

Dr. Henry C. Barkhorn (Newark): I think the answer to the question whether suction does any good or not is whether there are any accessory openings. If there are accessory openings, it goes through. You get hyperemia out of suction if there aren't any accessory openings.

Dr. Charles S. McGivern: Of course one naturally discusses maxillary antrum disease from 2 standpoints, so far as therapeutics is concerned; that is, from the standpoint of type of infection and also from the standpoint of mechanics. The reason why I attach any importance at all to whether the normal ostium is open or whether there is an open accessory ostium, is because it has great prognostic significance. Every patient who comes into my office with nasal discharge more than once or twice gets a maxillary antrum irrigation. Many patients who come into my office have had all sorts of operations on their noses—submucous resection, cautery operation, removal of turbinates and every other imaginable surgical procedure. Many times irrigation of the antrum discloses the real cause of their trouble, and an antrum operation relieves them. I have never used suction except once or twice on myself, and I came to the conclusion then, when I stopped to figure out the physics of it, that it couldn't be any good, because if you have a maxillary sinusitis, drainage through the normal ostium is very difficult and since suction produces negative pressure, it is logical to believe that swelling in the region would be increased and drainage further impeded.

As to the use of adrenalin, I don't think there is any excuse whatsoever for using adrenalin in the nose unless you are going to operate, because there is no question in my mind but that adrenalin is the most irritating drug you can use in the nose. It will give you all the symptoms of an acute coryza and certainly leaves the mucous membrane in worse shape after you have used it than it was in before, on account of the paralysis of the blood vessels.

If you don't have a patulous ostium and you use suction, you are bound to produce a passive hyperemia, and you are adding a passive hyperemia to an active hyperemia, which is the thing you are trying to correct. The natural ostium is too small to allow a catheter of any size to go through, and if you did get in you could not get anything out because in a sinus ostium so swollen you couldn't get any water past the catheter. The same thing is true about so-called postular drainage. What good is it if your ostium isn't open, and if you have an accessory ostium or a normal ostium you don't need anything.

There was one other item which I intended to touch on in my paper and that is the idea of teeth causing maxillary antrum disease. That is a thing which rarely happens. It is easier to believe that in maxillary antrum disease the progress of the pathology is downward rather than that the tooth infection travels upward through the floor of the antrum. I had a discussion on this point with Hirsch, for whom I have the greatest respect; as a matter of fact, I think he is probably the best nasal pathologist in the world in this class of work, and when the question came up as to how many diseased antrums were due to the teeth he stated that he could only show me one specimen in a thousand in his collection where a tooth root appeared in the antrum.

Chairman Emerson: I think we are all familiar with the secondary adrenalin reaction of which Dr. McGivern speaks. I don't know how many of you have tried it. I am not doing this work myself but my associate is most enthusiastic over butyryn ephedrin. It is a very satisfactory drug and I find it of some use in eye work; Tymeson finds it very valuable in nasal work. It doesn't give you that congestion or tremendous headache that adrenalin often causes. If you haven't done so, I recommend that you try it in some of these cases; for instance, a frontal sinus case in which you do not want to operate, that you want to drain and shrink down every day, that you want to get well without operating. Dr. Tymeson is using this drug with great satisfaction in those cases.

DUODENOBILIARY DRAINAGE (Nonsurgical)*

MAURICE ASHER, M. D.,
Newark, N. J.

- I. A review of the past ten years.
- II. History of the procedure.
- III. Its value in diagnosis.
- IV. Therapeutic usefulness.

It is significant of the modern dominance of surgery in the healing art, that it is necessary to mention in the title of this paper that the drainage to be discussed is *nonsurgical*. I believe that, whenever possible, medical treatment should precede surgery, and that in biliary disease we should give more attention to that stage that is precalculous, so that by early recognition of a biliary infection we may prevent the formation of calculi and, perhaps, save the patient from an operative procedure.

The history of biliary drainage begins with

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the history of the duodenal tube. In 1908 Einhorn wrote: "The direct introduction of rubber tubes into the pylorus has been tried by Hemmeter and Kuhn but not with very marked success." And at about the same time Boas introduced a tube into the stomach and then massaged the region of the liver to obtain the regurgitated duodenal contents. Einhorn (1908) devised a duodenal bucket at the end of a string and gave it to the patient at bedtime when the stomach was empty. He withdrew it in the morning. The occasional blood mark on the string led him to the string test for peptic ulcer. Kuhn used metal spiral tubes and Hemmeter inflated the stomach with a balloon through which a tube could be introduced into the duodenum. He also passed a specially divided catheter along a string which was introduced into the duodenum through this inflated balloon, and so obtained the duodenal contents. Subsequently, the duodenal tube was devised which permitted the duodenal contents to be aspirated. Einhorn spoke of this as the duodenal pump and Aaron ascribes the credit of the duodenal tube to Einhorn.

At the present time a number of duodenal tubes are obtainable all very much resembling one another except in the bulbs, which vary in shape and weight. For duodenal work, I have found Lyon's tube the most satisfactory as it readily enters the duodenum, and the openings in the bulb are sufficiently large to prevent clogging by mucus. A word of warning, however. I have seen so-called Lyon's tubes in the shops that were incorrect. The bulb was too large and the rubber was of inferior quality.

The earlier studies of the duodenal contents were in relation to the digestive action. The presence of the digestive ferments, tryosin, steapsin and anylopsin, and their action on food. Little or no attention was at that time given to microscopic findings, the cells, bacteria, crystals, parasites, etc. After the introduction of biliary drainage by Lyon, he pointed out the importance of the cellular, bacterial and parasitic findings, their differentiation, and their relation to the symptomatology.

Sabotta's "Text-Book of Human Anatomy"

states: "The wall of the gall-bladder is of moderate thickness and contains a weak muscular coat." And in Gray there is a description of the muscular fibers of the middle or fibrous coat, most of which are longitudinal, and of the muscular fibers in the fibrous coat of the biliary ducts, which are circular. These muscular fibers at the distal end of the common duct form a sphincter muscle which bears the name of Oddi who first described it. (Lyon.)

The innervation of these muscular fibers is tersely stated by Crohn, who says, "It seems to be conceded that, as elsewhere in the alimentary tract, the vagus and splanchnic systems are the interacting tracts that form cross innervation to the gall tract." This is important, for it leads to the understanding of the experiments of Meltzer (1917) who found that magnesium sulphate caused muscular relaxation when applied to the intestinal wall and suggested, in accordance with the "Law of Contrary Innervation," that the relaxation of the sphincter of Oddi would result in the contraction of the gall-bladder and biliary tract system.

In April, 1917, in a paper published by Meltzer, there was the following footnote: "In experiments with magnesium sulphate, I observed that the local application of a 25% solution of that salt on the mucosa (of the duodenum) causes a completely local relaxation of the intestinal wall. It does not exert such an effect when the salt is administered by the mouth, that is, when it has to pass through the stomach before it reaches the intestines. The duodenal tube, however, apparently has reached an efficient practical stage. I make, therefore, the suggestion to test in jaundice and biliary colic the local application of a 25% solution of magnesium sulphate by means of the duodenal tube. It may relax the sphincter of the common duct and permit the ejection of bile, and perhaps even permit the removal of a calculus of moderate size wedged in the duct in front of the papilla of Vater. The procedure could be developed into a practical useful method."

Lyon immediately on the publication of this paper began his experimental studies on

human beings and found that by douching the duodenum with a hypertonic solution of magnesium sulphate the following results were obtained: Firstly, the duodenal tube was introduced into the duodenum and remained in situ. Then a warm solution of magnesium sulphate (75 c.c. 33.3% solution) was allowed to flow in and remain in contact with the duodenal wall for 3 minutes, then permitted to return. There followed a flow of clear light yellow bile, succeeded by a viscid dark bile, and this in turn by a lighter golden bile. These Lyon named the A, B, and C biles. The A from the ducts, the B from the gall-bladder and the C from the liver. A more detailed description of these bile fractions I must omit, but they are described in detail in Lyon's book, "Nonsurgical Drainage of the Gall Tract."

Several writers have questioned the origin of the B bile, denying it came from the gall-bladder, but the recent work of Lake (The American Journal of the Medical Sciences, December, 1927) is quite convincing. He gave tetraiodophenolphthalein by mouth at night, and the following morning a gall-bladder Roentgen film was taken. Then the duodenal tube was introduced and the magnesium sulphate solution or olive oil used. Later films were again taken. Eighteen patients were utilized. In eight cases a good B fraction was obtained and in all there was a change in the shadow of the gall-bladder from complete disappearance to slight reduction, those showing the slight reduction being pathologic gall-bladders. In other cases where no B bile was obtained there was no definite change in the gall-bladder shadow after drainage or no visualization of the gall-bladder. He concludes: "The above results seem to indicate that samples of bile from the gall-bladder can be recovered through the duodenal tube for microscopic and bacteriologic examination."

In my own work I have never obtained a B fraction from a patient in whom the gall-bladder had been removed. Others, however, have reported that a small amount of dark bile has been obtained in cholecystectomized patients, but the explanation has been that,

due to the sphincteric action of the muscle of Oddi there has been a dilatation of the ducts and an attempt on the part of nature to restore the gall-bladder function. This may occur, but it has been shown by experimentation that after the removal of the gall-bladder the sphincteric action is lost and the common duct empties constantly instead of intermittently into the duodenum.

Let us, therefore, agree that the B bile comes from the gall-bladder on stimulation and then we have the question of what will act most positively as a stimulant. I have used magnesium sulphate solution (33.3%), olive oil, peptone solution (10%), and a solution of hydrochloric acid in strength approaching the gastric juice. By far the most effective is the magnesium sulphate solution. With the patient lying on the right side, we keep the solution in the duodenum for 3 minutes and then allow it to return. If the result is not satisfactory we repeat the stimulation in an hour and then in another hour. The first time with 75 c.c., the second with 50 c.c. and the third with 25 c.c.

Has this procedure a diagnostic value? Piersol, Bockus and Shay (American Journal of the Medical Sciences, January, 1928) report the study of 57 cases of gall-bladder disease (46 of which were cases of calculi). They came to the following conclusions: "A characteristic pigment, calcium bilirubinate, has been found in the bile drained from the duodenum with sufficient constancy to give significance to the diagnosis of gall-stones. All of the cases having both cholesterol crystals and pigment in the bile obtained by biliary drainage proved to be cases of gall-stones. In the majority of cases these elements were only found in the dark or B bile." They compare the value of duodenobiliary drainage and oral cholecystography and say that "in only 35% of proved gall-stone cases were the stones visualized by oral cholecystography whereas in the same series a preoperative diagnosis of stones was made from the duodenal tube findings in 47% of cases. Also a preoperative estimate of gall-bladder function from the duodenal tube examination proved correct in 88%. On the other hand, a similar estimation,

by oral cholecystography was found correct in only 65% of cases.

Einhorn some years ago described the masses of pigmented crystals, probably calcium bilirubinate, found in the duodenal contents under the name of "bunch berry crystals".

It may be appropriate here to say a few words about cholecystography. It is a very valuable procedure but it has its limitations. Seth Hirsch and Taylor (Medical Journal and Record, November 16, 1927) say, "There exists a feeling of uncertainty regarding the extent of its value and as to the criteria by which a diagnosis is to be established." I, personally, feel that the visualization of the calculi is positive and final, but the appearance or nonappearance of the gall-bladder shadow is not at all convincing.

To return to the diagnostic value of the drainage, I am led to believe, and experience tends to confirm that belief, that in a carefully conducted drainage such as I have described, the nonappearance of the B bile indicates pathology. The following cases illustrate: (1) Male, 40 years. Attacks of epigastric pain at night; cholecystography negative; later jaundice; no B bile obtained; duodenal contents and C bile negative microscopically. Operation advised. Cholecystectomy done. Gall-bladder filled with stones. (2) Male, 50 years. Nausea, vomiting, followed by jaundice; no pain, marked weakness. Repeated drainage gave slight result and no B bile. No cholecystography. Operation showed calculi. Complete recovery.

The macroscopic, microscopic and chemical examination of the duodenal contents and the B bile are important diagnostically. A duodenal fluid that is clear, alkaline or neutral in reaction, gives no reaction for blood and is microscopically negative, is normal, but the presence of blood, calcium bilirubin (the calcium bilirubinate of Piersol, Bockus and Shay or the bunch berry crystals of Einhorn), many cholesterol crystals, bile stained pus cells, bile stained colonies of cocci and parasites, such as the *Lamblia intestinalis*, are unquestioned evidence of pathology. A B bile

that is turbid and contains the same crystals, cells, cocci and parasites is also not normal.

I believe that biliary infection precedes calculi. With a short history and an early operation for calculi the gall-bladder will show only a moderate catarrhal inflammation. With a longer history all the structures of the gall-bladder may be involved and there may also be pericyclic adhesions. This is the history of a progressive inflammation the result of infection. If we can treat these patients in the precalculi stage before attacks of calculi colic we can do much to prevent the formation of calculi. The symptoms of this period are those of so-called indigestion, distress after food, belching, burning, nausea, etc. Physical examination is negative. There may be some tenderness on palpation below the liver over the region of the gall-bladder. This is often absent. The fractional gastric test is negative or there may be a hypo-acidity or an achylia. There may be a pylorospasm and some delay in gastric evacuation. The gastro-intestinal x-ray is negative or occasionally there may be a spasmodic appearance of the duodenal bulb. Biliary drainage will show, both in the duodenal contents and in the B bile, bile stained pus cells and bile stained colonies of cocci. These are on occasion very deeply bile stained. There may be also much unformed and broken down material which we classify under the name of débris. This may be also deeply bile stained.

In one class of patients this condition is frequently complained of but passes unrecognized—the pregnant woman in about the third decade of life. Her distress is considered a reflex and is treated with sedatives and laxatives. Shortly after labor there is a sharp attack of biliary colic followed by other attacks and as soon as the period of nursing is over, or sooner, she is operated upon. These patients should have more study in the earlier period of pregnancy in the hope that the formation of the calculi may be prevented.

Another interesting finding in biliary drainage is the parasite, *Lamblia intestinalis*. This flagellate was considered an intestinal infection, more common to the tropics, and is des-

cribed by Stitt in his "Tropical Diseases", as having, in the free form, 4 pairs of flagella, being 15 microns long and having a trembling motion. He lists *Lamblia* under "Causative Agents of Dysentery". Lyon and Swalm have an excellent article on the subject in the American Journal of Medical Sciences, for September, 1925, under the title: "Giardiasis"! We have had 21 cases in the past 8 years. Piersol, Bockus and Shay (American Journal of the Medical Sciences, January, 1928) found in 50 cases of calculi that 4 had an added infestation with the *Lamblia*. Although considered as a cause of dysentery, none of our patients had dysentery. Most had normal bowel movements. Some were constipated. We make our diagnosis from finding the free form with the tumbling motion (there is also an encysted form) in the duodenal contents or in the B bile.

In some of our cases we found *Lamblia* only in the B bile and not in the duodenal contents or in the C bile; in all they were more numerous in the B. We have been therefore led to believe that the gall-bladder is the habitat of the parasite. Lyon notes that Smithies and Hemmeter have reported its recovery from the gall-bladder at operation. The patients who suffer from this infestation complain of epigastric distress with a sense of tension. They are nervous and apprehensive. Physical examination is negative. There may be some epigastric tenderness on palpation. Fractional gastric test and gastric-intestinal x-ray are negative. And on duodenal study and drainage the parasite is found in the duodenal contents and in the B bile.

These patients with giardiasis usually have a long history. They have had many examinations and as nothing definite is found they are classed as neurotics. The following illustrates: Woman, 42 years, ill for 10 years, complained of heaviness after food with a sense of epigastric constriction and tension; belching, insomnia, pallor and loss of weight. Appendix had been removed and a diagnosis of peptic ulcer had been made. Physical examination negative; fractional gastric test showed moderate hyperacidity, good digestive action, good motor function and no occult

blood. Gastro-intestinal x-ray negative; duodenal bulb normal; tenderness on palpation over the pyloric antrum. Duodenal contents obtained with the tube were negative but the B bile obtained by drainage contained large numbers of *Lamblia*. Patient has improved very much under treatment.

Another occasional finding in biliary drainage is the typhoid bacillus. A few years ago I had a patient whose B bile was a pure culture of the typhoid bacillus. She complained of epigastric distress and there was no history of typhoid fever. The stools were not examined.

The New England Journal of Medicine, April 5, 1928, makes the statement that the State of Massachusetts is believed to be the first state to endorse the procedure of the removal of the gall-bladder in a typhoid carrier by paying the charges incident to the operation.

As to the therapeutic value of duodenobiliary drainage, I believe that cases of cholelithiasis with jaundice should be drained prior to operation in the hope of relieving the jaundice and so lessening the tendency to hemorrhage. Certainly a much more reasonable procedure than the giving of calcium salts and other substances to increase the coagulability of the blood.

Catarrhal jaundice clears up readily by drainage. It is still a question as to what the pathology is in catarrhal jaundice. Is it a duodenitis with obstruction of the opening of the common duct, or is it a choledochitis? However, drainage gives prompt relief and a speedy cure. The following case is illustrative: A clerk, 35 years of age, had been jaundiced for several weeks; no pain; very ill and weak; lassitude, anorexia and mental indifference. Heart was rapid; urine contained bile. Rectal temperature was 102.2°; blood pressure 80/50. The duodenal contents and the B bile contained bile-stained pus cells and bile-stained colonies of cocci. A few drainages led to a prompt and complete recovery.

Biliary infections which include cholecystitis, choledochitis, cholangitis, sometimes with hepatitis and pancreatitis, are improved and cured by repeated drainages. To illustrate:

Man, 52 years; pain in right upper quadrant more or less constant; pallor, anorexia, constipation. Operation refused because x-ray showed no stones. Microscopic findings, bile-stained cocci and pus cells. Repeated drainages were given. Toward the completion of the treatment the B bile was cultured and showed no growth. Patient recovered and has been well for several years.

The treatment I have used for giardiasis—the infestation with the *Lamblia intestinalis*—has been repeated drainages. In all the patients there has been a decided clinical improvement. In some the *Lamblia* can no more be found. In none has cholecystectomy been done, although it would be a reasonable procedure. Further study and observation will be required in these cases.

Migraine is considered by some writers to be due to biliary infection and stasis, and Lyon and others have laid stress on the treatment of this trouble by drainage. I have found that in most of my migraine patients there is a hereditary element plus an ocular condition, frequently ocular muscle imbalance. Where there is no ocular condition I do drainage with moderate success.

There have been a number of patients in whom operation has been done for calculi with a later return of pain and distress. A cholecystotomy, a cholecystectomy and in some again an operation for the separation of adhesions. The discomfort, distress and pain still continue. These patients markedly improve with drainage.

Regarding the typhoid carrier. If it be accepted that the gall-bladder is the nidus of the typhoid bacillus in the typhoid carrier, the state assumes a great responsibility in urging operation to remove the gall-bladder. The idea is a good one and the typhoid carrier is a menace to the community. But he, himself or herself, is in good health and innocent of any wrong doing. Should such an operation end in a fatality the state has been party to the death of an innocent person, and the consent to the operation does not enter into the question. Would it not be better to try the safe procedure of biliary drainage?

In this short paper I have touched upon

many subjects rather briefly. I hope it will lead to further study and consideration of the main topic.

DISCUSSION

Dr. B. B. Vincent Lyon (Philadelphia): I have been very much interested in Dr. Asher's paper and feel that he is to be complimented on touching on so many aspects of this subject in a comparatively short paper.

In my discussion I would like to enlarge a little on some of the points that he has made. I believe it is becoming more generally accepted that all healthy gall-bladders or those with early disease, and a large variety of pathologic gall-bladders with unobstructed cystic ducts can be effectively drained by means of the duodenal tube and that the source of B, or dark colored, bile is actually from the gall-bladder in its larger part. For years this has furnished ammunition for stormy debate but is now definitely settled since the appearance of papers by Sachs, Pribam, Matzuo, Higgins and Mann, Whitaker, Lake and others too numerous to mention, who have confirmed by degrees the observations which I published 9 years ago and subsequently.

Although the drainage of the gall-bladder itself by a nonsurgical method is of great value diagnostically in nearly all cases and therapeutically in a large number, I personally believe that the therapeutic future of duodenal biliary tract drainage will be more concerned with drainage of the liver and pancreas, since it already shows considerable promise in the more direct management of some of our important problem diseases, such as the hepatic inflammations and cirrhoses; recurrent cholangitis; hemolytic jaundice with splenomegaly, other forms of jaundice, and arthritis with foci of infection for toxic cess pools within the hepatic intestinal tract. It has some place also in the management of pernicious anemia and in diabetes, despite the improvement in the treatment of these conditions by the liver diet and by insulin.

In some forms of nontraumatic epilepsy or epileptoid convulsions, resistant to other forms of management and hypothetically due to over accumulation of hepatic intestinal toxins of unknown nature, intensive drainage of the liver followed by transduodenal lavage has been remarkably successful in a limited number of cases in my own experience and in that of others who have communicated with me.

In regard to the subject of typhoid carriers to which Dr. Asher alluded, I have had several very successful results. To illustrate: A man, age 52 years, whom I saw in Februray, 1925, was a typhoid carrier 27 years after primary infection. During the Spanish War, in 1898, he developed a low running fever which lasted for about 7 weeks, and was considered malarial because it defervesced every few days, was associated with chills and then recurred. Biliary colics began in 1923, resulting in the removal of the gall-bladder containing several stones. During convalescence 2 months later patient developed a soft fluctuating tumor of the lower right abdomen which was evacuated of a pint of pus from which was recovered a pure culture of *Bacillus typhosis*. Cultures from the stool yielded a similar finding and he was then placed under New York State Health Board supervision as a typhoid carrier which resisted all measures of management. In February, 1925, cultures of this man's bile were heavily infected with typhoid bacilli, and from the persistent discharging

sinus in the right lower abdomen. Associated with this was a typical picture of hepatitis and recurrent cholangitis with chills, fever, sweats and jaundice. Patient was given about 2 weeks of continuous drainage, removing over 2 gallons of heavily infected bile, and this was followed by intermittent drainages for several months coupled with the use of typhoid vaccine. By the following September he was typhoid free in all cultures, was returned to New York State and released from Health Board supervision. He has been followed at intervals of 6 months up to date without further relapses and has been brought out of a serious and dangerous state of health to himself and his community. Certainly no other form of such direct management is available.

Dr. Asher also alluded to giardiasis. This is a very common upper intestinal parasitological infestation, if we hunt for it more carefully in our duodenal drainages. It is of greater pathogenic importance than has hitherto been recognized. Since I reported, with Dr. Swalm, in 1925, twenty cases then under our observation I have seen approximately fifty additional cases. In some instances it is responsive to biliary drainage with magnesium sulphate alone; in others, resistant to all therapy and constantly relapsing after biliary drainage, intravenous injection of neo-arsphenamin and hot transduodenal lavages with arsphenamin, mercurochrome, dimol, the French stovarsol Poulenc and the German yatrein 105 Behring. For fairly long periods the duodenum will remain free from Giardia, and one may be led into a sense of security in having accomplished a cure when a sudden recurrence appears usually in the B or gall-bladder fraction bile, leading to the suspicion that the gall-bladder is nesting and breeding parasites. That this is true in some cases has been recently confirmed by the finding of Giardia in gall-bladders removed surgically for this or other gall-bladder diseases; noticeably might be mentioned the report of Pietra and Allodi in the 1927 Italian literature⁽¹⁾ of 11 cases in which Giardia were found in the resected gall-bladders. Since this and other parasites have been found within the gall-bladder, presumably ascending by way of the common bile duct, it lends greater weight to the possibility of more frequent ascending infection of the gall-bladder and ducts by way of the duodenum than has hitherto been accepted.

I want particularly to point out the very frequent existence of cystic duct catarrh which produces partial or complete obstruction of the cystic duct, thereby giving rise to failure of recovery of typical B fractions, or in very small amounts. This condition can be definitely recognized under microscopic examination of the shaggy floccules recovered in the bile which will be found to consist of very dense, usually spiralled mucus that undergoes a characteristic oleaginous degeneration which chemically appears to be a fatty ester of cholesterol. There is no other definite means of recognizing this condition. In such patients the Graham cholecystogram will usually be positive, that is, no visualization of the gall-bladder takes place because the dye laden bile fails to pass the catarrhal blocked duct, thus suggesting pathology of the gall-bladder of a surgical degree. This is a very important differentiation to make in the interest of our patients, for we have proved in our study published March 17, 1928, in the Journal of the American Medical Association⁽²⁾, that such patients can be cured by repeated drainages and a surgical degree of pathology prevented. After

clearing out the catarrhal cystic duct they will thereafter give normal gall-bladder drainages and show restoration of normal gall-bladder function when rechecked by cholecystogram. Many such patients can be spared from undergoing surgery. The same statement applies to cholesterosis and prelithiasis of the gall-bladder.

Lastly I want to point out that in the occasional cholecystectomized case in which dark colored bile is recovered closely resembling in certain instances a typical gall-bladder bile, this need not confuse the issue as to the gall-bladder being the usual source of B bile. It is quite evident from the recent publication by Counseller and MacIndoe in Surgery, Gynecology, and Obstetrics, 1926⁽³⁾, that in such cases the intrahepatic and extrahepatic duct system making up the biliary tree is often enormously dilated and contains pockets or diverticula from which stagnant dark colored bile can be recovered by drainage. A critical review of such patients indicates that most of them have had periods of long continued obstructive jaundice prior to surgery, or have clinically recognizable pathologic changes in the liver, such as cirrhosis or hepatitis.

If, in our medical education, we can gradually develop a wider realization that duodenobiliary drainage has a wide application both diagnostically and therapeutically, that it is of great value to the surgeon in preoperative preparation and postoperative follow-up, and if we fairly acknowledge the obvious limitations concerned with both surgical and nonsurgical measures and by developing better team work combine our efforts, we will have taken a great step toward the Utopia of medical endeavor in the interest of our patients.

Before closing let me give you one word of warning. I have learned that duodenobiliary drainage has been exploited by doctors poorly trained in general medicine and in special technic, who improperly select for such treatment patients who manifestly require surgery; by the type of trained nurse who advertises her proficiency in other technical procedures such as colonic irrigations; and by the out and out charlatan who trades on the psychic effect of removing a small amount of bile or bile stained fluid from gullible but purse-fat people who are intrigued by the pseudoscientific patter of such menaces to human health. It is deplorable that such practices exist. It furnishes entirely proper ammunition for some opponents of this method of treatment, a certain number of them from overbalanced institutions with surgical axes to grind, but in turn reflects discredit on them as well as on a method whose merits and limitations are becoming more generally known.

I shall demonstrate by lantern slides and x-ray films the evidence on which some of the foregoing statements are based.

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ANALYSIS OF 250 CASES OF GALL-BLADDER OPERATION*

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This paper is based upon a study of the operative and end-results in a series of gall-bladder operations performed by the writer within a period of 15 years, up to and not including operations during the years 1927 and 1928. A personal follow-up was carried out in about 92% of these cases, with particular reference as to the recurrence of symptoms, and percentage of re-operation in cholecystostomy cases. Postoperative sequels of cholecystectomy were also studied. The occurrence of postoperative hernia in both types of operations and their relative frequency were noted. The question of drainage vs. non-drainage in cholecystectomy has been studied in a series of operations performed within the last 3 years.

It is a well known fact that during the early days of gall-bladder surgery, cholecystostomy was accepted as a classical operation. It was only after surgeons began to report a number of recurrences requiring secondary operations, that removal of the gall-bladder as a means of obtaining a permanent cure was advocated, and the operation of cholecystectomy was then generally adopted.

The question of cholecystostomy vs. cholecystectomy was still a debatable one until recently, and even at present one may find in the surgical literature an occasional warning against its universal adoption as a routine procedure. There is still some diversity of opinion as to the part that the gall-bladder plays in the human organism. The writer himself was also in a doubtful state of mind regarding this question until several years ago, but after studying the end-results in a fairly large series of gall-bladder operations, which included an almost equal number of cholecystectomies and cholecystostomies, he came to a

definite conclusion that the gall-bladder should be removed in every case, provided there are no definite contraindications to the performance of such an operation.

In the first 140 cases reported in this series, we find cholecystostomy predominating; cholecystostomy in 84 against cholecystectomy in 56, which is 60 to 40. In a follow-up of the 84 cases, we find that 9 patients required re-operation for recurrence of symptoms; 5 were improved but still suffered from vague symptoms referable to the upper abdominal region.

In a subsequent follow-up of 102 cholecystostomies which are included in these series, we find that out of 102 cases, 17% or more suffered from recurrent attacks of gall-bladder colic, of sufficient severity to require reoperation. In 11 of these cases in which the patients were subsequently operated on by myself, stones were found in the gall-bladder; 4 suffered from chronic cholecystitis, with extensive adhesions between the gall-bladder, stomach and duodenum; 1 developed a severe attack of cholecystitis and pancreatitis 3 years after the original drainage operation; 1 had recurrent attacks of cholecystitis, biliary fistula, chronic pancreatitis and pancreatic lithiasis, which were disclosed at autopsy. Six of these cholecystostomy patients are classified as improved, although they frequently suffer from symptoms of upper abdominal discomfort and occasional pain, but no jaundice.

The percentage of cures, if we may be permitted so to class those patients who remain free from symptoms for a period of 3 years after operation, is 67.6% (69 cases).

The time elapsed after operation and follow-up is not sufficiently long to draw any definite conclusions as to the ultimate results in some of the early cases. In other words, in at least 17% of the cholecystostomy cases a secondary operation for total gall-bladder extirpation was necessary to effect a cure. If we go a step further and add to this large group of definitely proved recurrences the 6 cases which are classified as improved, in which the probability of a secondary operation is very likely to be indicated in the future; and if we also take into consideration the fact that some of these cases which have been free

*Read before the General Scientific Section at the 162nd Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 6-9, 1928.

from symptoms for only 2 or 3 years may give a certain percentage of recurrences, the results of the drainage operation are not what one would most desire.

Of the 56 cholecystectomies included in this first series of 140 cases which were followed up for a sufficiently long period to be of any statistical value, we find 47, or 84%, classified as free from any symptoms; 2 are classified as improved; 3 untraced. The duration of time between operation and follow-up ranges from 2 to 14 years.

In a subsequent follow-up of 113 cholecystectomies included in this series, we find that 90 patients, or 80%, are free from any symptoms; 8 improved; 8 untraced. Those that are classified as improved suffer from mild gastric disturbances, such as an occasional attack of gastric flatulence or epigastric distress after meals; in only one case in this series was there recurrence of sharp abdominal pain. The roentgenogram in this case showed a shadow in the region of the pancreas and roentgenologic interpretation was "probably stone in the pancreas." This patient underwent a cholecystectomy 3 years after cholecystostomy. The findings at the time of the second operation were acute pancreatitis and cholecystitis. Careful exploration of the bile ducts showed no stones; no history of jaundice was elicited either before the first operation or during the interval between that and the second operation. The gall-bladder was removed, and drainage for the pancreatitis instituted. After the second operation the patient made a most uneventful recovery. She has had no jaundice since, but has suffered several attacks of upper abdominal pain, sharp in character, radiating to the dorsal region. There is no evidence of gastric or duodenal ulcer, the roentgenologic interpretation of pancreatic stone is probably correct and may be responsible for the present symptoms.

The total number of cases reported in this series is 250, of which 227, or 90.8% were females; 23, or 9.2%, males. The total number of cholecystostomies was 107, or 42.4%; of cholecystectomies, 141, or 57.2%; cholecholestomy and cystectomy, 2. There were 16 deaths, equally divided between the two

types of operations, 7.5% in the cholecystostomies and 5.6% in the cholecystectomies. The average hospital days in the two types of operations was 16.9 for cholecystectomy and 21.4 for cholecystostomy. In analyzing the mortality statistics we find, contrary to general expectation, that the death rate in the cholecystostomy was higher than in the cholecystectomy series. This is explained by the fact that a number of patients upon whom the drainage operation was performed suffered at the time of admission to hospital either from a severe gall-bladder infection or some complicated constitutional disease, such as chronic nephritis, acute pancreatitis, or chronic respiratory disease. Two patients included in this group had a very severe cholecystitis and pancreatitis at the time of the operation; one died 3 days after operation, and one 22 days later. Three died of peritonitis, following acute suppurative cholecystitis; one suffered from a ruptured gall-bladder of 3 days' duration. This patient was moribund at the time of admission.

Mortalities in cholecystectomy may be classified in 2 distinct divisions: (a) Those occurring in cases uncomplicated by the presence of any other surgical condition, such as stone in the common duct, obstructive jaundice, chronic pancreatitis, or other constitutional disease. (b) Those occurring in cases with complications. In the uncomplicated cases the mortality in this operation in our series is 3%, while the total mortality rate is 5.6%. This included deaths from the operation in cases of ruptured gall-bladder with peritonitis, 2 of biliary fistula with pancreatic stone, and 2 cases of stone in the common duct with cholangitis.

Until 4 years ago we followed the universally accepted belief that drainage is essential to a successful recovery from cholecystectomy. The tendency at present among many surgeons is against drainage. The point is made that if it is considered safe to close the abdomen in an ordinary appendectomy, even in the presence of subacute infection, why should one hesitate to close the abdomen in cholecystectomy, if the operation is done with the usual precautions?

Arguments against drainage are that it (a) is conducive to secondary infection, (b) predisposes to postoperative hernia, (c) prolongs the patient's convalescence, and (d) is conducive to formation of extensive adhesions at the drainage site.

On the other hand, those who favor drainage point to the fact that in some instances leakage of bile may take place from the raw liver surfaces or a defective cystic duct ligature, resulting in extensive peritonitis with disastrous results. In our own cases, during the last 3 years, we find that in about 25% no drainage was used. In the beginning this measure was omitted with a certain degree of diffidence, but the postoperative results in the first group of selective cases convinced us that it is safe not to drain in those cases where there is no acute inflammatory condition present at the time of operation. In the last 35 cases included in this series, in which 28 were simple cholecystectomies, drainage was used in only 12 cases; in the other 16 there was complete abdominal closure. In other words, 60% were not drained. We drain only those cases in which we have reason to believe there might be some soiling of the peritoneal cavity during operative manipulation, or where careful peritonealization of the raw liver surfaces is not carried out.

We cannot find a single instance of undue morbidity or mortality that can be attributed to failure to drain in our cases. It is certainly reasonable to assume that the incidence of postoperative hernia will be considerably lessened in undrained cases. We are firmly convinced that in properly selected cases, if all necessary precautions are taken to perform a clear dissection, and if careful ligation of the cystic duct with proper peritonealization of the raw surfaces is carried out, drainage is not indicated.

Among postoperative complications one may find that wound infections and biliary fistula are more likely to occur after cholecystostomy, for self-evident reasons. Postoperative hernia is also apt to be a more common sequel to this operation as well as to that of gall-bladder removal where drainage was used. The incidents of postoperative hernia in the series of 140 cases included in this group is

7% for cholecystostomy as against 3.5% for cholecystectomy.

The unpleasant sequels associated with extensive postoperative adhesions can be obviated only by careful operative manipulations, scrupulous peritonealization of raw surfaces, and a minimum amount of drainage. One of the strong arguments advanced, and one which is justifiable on the part of the occasional operator against cholecystectomy, is the injury to the bile ducts during extirpation of the gall-bladder. This is a serious accident, which not infrequently occurs, even in the hands of the skillful operator. One may meet occasionally with some accidental injury to the contiguous structures in doing any abdominal operation. An injury to the stomach, intestine, or urinary bladder, even the ureter, can be repaired with a fair degree of success; but in no instance are the results so disastrous as in the case of serious injury to the main bile ducts. These injuries result in many cases of invalidism and even death. They are extremely difficult to repair, and repeated attempts to cure them do not always lead to successful results. Such injuries are frequently due to the presence of anomalies, either in the course, length, or mode of union between the cystic hepatic and common ducts. This accident occurred once in our series during the performance of a cholecystectomy, secondary to a cholecystostomy. There were extensive adhesions about the gall-bladder and the biliary ducts, which were very difficult to separate, and identification of the ducts was almost impossible. Such mishaps can be obviated only by careful dissection of the biliary duct, and by keeping in mind anomalies.

An hepatic or common duct may be easily mistaken for the cystic duct in those instances where the latter is very short and runs parallel with the hepatic duct. Several times in our experience we found the ampula of the gall-bladder closely adherent to the common duct. It required very careful upward dissection from that structure before the cystic duct could be isolated and identified. It can be readily seen that the application of a clamp to the ampula of the gall-bladder before separating it from the common duct could easily result in serious injury to that structure.

The cystic duct should always be separated from its bed by incising the right free border of the gastrohepatic omentum. The direction of the duct and its insertion into the common duct should be noted. In applying the clamp one should be careful that no other structure is included in its grasp. The clamp should encircle the cystic duct, and may be moved upward to the point where the duct originates at the neck of the gall-bladder, and downward to its insertion at the common duct. The clamp is then locked as near its point of origin as possible, and the duct is cut across and ligated with a No. 1 chromic gut suture. The cystic artery should be ligated separately whenever possible. Traction is then made on the neck of the gall-bladder in an upward direction. With blunt, curved scissors, the peritoneal fold of the gall-bladder is separated and the organ removed from below upward. The peritoneal flaps are brought together by No. 1 catgut suture and the operation is complete.

We have adopted the technic of removing the gall-bladder from below upward. We believe that the blood supply can be much more easily controlled by this method. The cystic duct and the structures in the region of the foramen of Winslow can best be identified and the ligation of the cystic artery can be done more expeditiously in this manner.

It is only through very good exposures and careful dissection that injury to the bile-ducts can be avoided during the performance of cholecystectomy.

CONCLUSIONS

(1) Cholecystectomy in the hands of the experienced surgeon is a comparatively safe procedure, and should be the operation of choice in most cases.

(2) In the presence of complications, or when considerable operative difficulty is encountered, particularly in the hands of the occasional operator, cholecystostomy is the safer method.

(3) Injury to bile-ducts can be averted only through careful dissection and clear visualization of the cystic duct before it is ligated.

(4) Drainage in cholecystectomy is indicated only in those cases where one has reason

to believe that some soiling of the peritoneal cavity has taken place during operative manipulations.

(5) Acute suppurative gall-bladder diseases, particularly if associated with other complications, such as pancreatitis or cholangitis, should be treated by drainage.

Case Report

CARCINOMA OF LUNG METASTASIZING FROM THE PROSTATE

Franklin W. Rice, M. D.,
Morristown, N. J.

A man, aged 64, gardener by occupation, first consulted me in June, 1926, for difficulty in voiding. A general physical examination disclosed an enlarged prostate, a myocarditis, hypotension (blood pressure 104/66), cystitis and pyorrhea.

Dr. Mills saw this patient in consultation and a prostatectomy was advised, but the patient refused because a neighbor had died a few months before from a prostatic operation.

I did not see patient again until February, 1928, when he consulted me for a bronchitis. At this time he was spitting blood in streaks and reported having lost 20 lb. in 3 months. He also complained of dyspnea and weakness. Blood pressure 112/66; heart sounds distant and of poor quality; lungs, on percussion, showed dulness on both sides posteriorly and, on auscultation, many friction and occasional moist râles were heard; abdomen negative; no tumor masses detected; prostate at the time felt nodular, and voiding was accomplished with great difficulty. Urine examination showed low specific gravity, 1.011, many red blood cells, hyaline, granular and some prostatic cells.

Patient was sent to hospital for x-ray examination, and diagnosis of malignancy of lung was made. Seven sputum examinations for tuberculosis were all negative. Temperature ran between 99° and 101°, and at times patient would cough up a cup of what looked like almost pure blood. He died in May, 1928.

I present this case because it is undoubtedly a lung cancer, secondary to prostatic cancer, and I believe that if the prostate had been removed 2 years ago the man would be alive today. Statistics show that 20-25% of enlarged prostates in men around 60 years of age are cancerous.

In Memoriam

DODGE, Walter, diagnostician of the Orange Board of Health and a practicing physician in that suburb since 1893, died on the morning of September 4, 1928, at his home, 36 Cleveland Street. He had been ill three weeks. Traffic Policeman Michael Savage was selected for a blood transfusion Saturday morning and soon after the operation Dr. Dodge's condition was reported improved.

He suffered an attack of septic poisoning recently, but pneumonia was declared the immediate cause of death. Dr. Dodge was said to be the first physician in Orange to use an automobile, but in recent years had walked to homes of patients for exercise. A son, Joseph Dodge, now on his way home from California, and a brother and sister are the only immediate survivors.

Dr. Dodge was the son of Joseph Smith and Mary Hall Dodge, both of old New England families, and was born March 11, 1868, at Stamford, Conn. He obtained his preparatory education there, finishing at the King Private School.

He was graduated from Yale, class of 1890, and received his M. D. degree from the College of Physicians and Surgeons, Columbia University, in 1893. He became an intern at Orange Memorial Hospital the same year.

Dr. Dodge was a member of the Essex County Medical Society, the New Jersey State Medical Society, Orange Practitioners Society, Orange Mountain Medical Society, American Medical Society and Memorial Hospital Medical Society of Orange. For 3 years he was a member of Company C, Fourth Regiment, Connecticut National Guard.

Mayor Murray of Orange paid the following tribute: "Dr. Dodge was associated with me officially and was my personal friend. I had the highest respect and greatest affection for him. During the last few years, I was closely associated with him in Board of Health matters as he tested the city water daily.

"He endeared himself to all who knew him because of his kindly manner. He was one of the ablest physicians and finest citizens Orange has ever had. His death is a great loss to the city and he is mourned by all the people.

"The principal characteristic of the doctor was his way of practicing medicine for the love of it. He was never interested in making money. He practiced for the benefit of the community and not for his own benefit. He was a true doctor of the old school. He had a very noble character for these days."

Prayer was offered for Dr. Dodge Sunday at the services of the First Church of Orange (Presbyterian) by the pastor, Rev. Dr. Harmon H. McQuilkin.

MURRAY, Eugene Wilson. In the early morning of September 18, 1928, Dr. Eugene Wilson Murray closed his eyes in his last sleep to which he had lain down all unaware of that "far continent toward whose shores himself was sailing".

Dr. Murray was born in Syracuse, N. Y., June 29, 1874, of Robert A. Murray and Artimesia Foot Murray. His early education was received in Northwestern University, School of Pharmacy, from which he entered the Medical Department of Syracuse University and from this he was graduated with the class of 1898. He was a member of the Park Presbyterian Church of Newark. Dr. Murray was married on December 14, 1899, to Mary Frances Reed, of Syracuse, N. Y., by whom and his son, Eugene W. Murray, Jr., of Clearwater, Florida, his mother, Mrs. Robert A. Murray, 2 brothers, Grant and Robert Murray, and a sister, Mrs. Clyde Brown, all of Syracuse, N. Y., he is survived.

He was consulting physician to the Newark City Hospital, Presbyterian Hospital, Women's and Children's Hospital, the Irvington General Hospital, Past President of the Isolation Hospital, Secretary of Widows and Orphans Relief Society. He was a member of the American Medical Association, New Jersey State Medical Society, New Jersey State Pediatric Society, Academy of Medicine of Northern New Jersey, Essex County Medical Society and member of the Council, Essex County Medical Milk Commission, American Association of Medical Milk Commissions, the Practitioner's Club of Newark, the Essex County Country Club, Manasquan Country Club, a Thirty-second Degree Mason, St. John's Lodge, Order of the Mystic Shrine, member of the Psi Upsilon fraternity, Nu Sigma Nu Medical fraternity and Medical Director and Physician-in-Chief of the Babies' Hospital—Coit Memorial—of Newark. At the last meeting of the New Jersey Medical Society in June, 1928, Dr. Murray acted as Chairman of the Section on Pediatrics.

After graduating from the Medical Department of Syracuse University in 1898, he served as intern at the Newark City Hospital and at Blackwell's Island Hospital, New York, and began the practice of medicine in Newark in 1899. In 1917 he succeeded Dr. Henry Leber Coit as Medical Director of the Babies' Hospital, giving up general practice and devoting himself to his chosen field of pediatrics. He gave unsparingly of his time and strength to the campaign for a new hospital in memory of Dr. Henry Leber Coit, its founder. This entailed an expenditure of health and strength which proved a serious handicap in his recent brief illness. He was noncombative, but he proved by his accomplishments that he knew how to hold to a purpose and not be afraid. His coöperation with confrères on boards of management could always be counted on, yet he lacked nothing of independent suggestion in constructive policies.

The upbuilding of the service of the Babies' Hospital since his appointment as Medical Director bears testimony to his insight into the community's growing needs. In his going, the community loses a citizen whose ability and high worth have long been established. He brought himself up from obscure fortunes to a brilliant position in his profession. He had a public career of importance and he put into practice a system of organized, consolidated and responsible administration in his directorships. His life was all too short, but he leaves behind a memory of faithful service and work well done.

RUNYON, Mefford, of South Orange, former Chief of Staff of Orange Memorial Hospital and known throughout the state as a surgeon, died September 20, from a heart attack at his summer home at Edgarton, Mass. Dr. Runyon had suffered a stroke some time ago.

Dr. Runyon was born at Iselin 67 years ago. He was graduated from Rutgers College and New York University Medical School. He practiced medicine in South Orange 40 years and 35 years ago founded a hospital in the village which bears his name.

In 1918 Dr. Runyon married Mrs. Katherine Flower Kip of South Orange in Canada.

Dr. Runyon was a member of the Metcalf Foundation, Orange Mountain Medical Society, William Pierson Medical Society, Hospital Graduates Club of New York, Essex County Medical Society, American College of Surgeons and New York Yacht Club.

In 1914 Dr. Runyon went to Freiburg, Germany, to study twilight sleep.

Dr. Runyon was an intern at Orange Memorial Hospital in 1881. He became Chief of Staff in 1918 and held that office 5 years. He had been a member of the consulting staff the last 2 years.

During the war he was connected with the Canadian medical forces. In 1917 he became head of a hospital which had been the Kip summer home on Leek Island, in the St. Lawrence River, and which had been given the Canadian government.

Dr. Runyon was associated with the Mayo Brothers' Sanatorium at Rochester, Minn., a short time.

His first wife died a number of years ago. He leaves his wife, a son, Paul Runyon, a Princeton graduate, and a sister, Mrs. E. A. Currier, of East Orange.

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COUNTY SOCIETY OFFICERS

Of our 21 component county medical societies in New Jersey, 16 hold their "annual" meeting, at which officers for the ensuing year are elected, in the month of October, and nearly all of the others choose their officers during the months of November and December. This is, then, the time of year when every member of the State Medical Society should give some serious thought to the question of proper representation in that organization and the proper choice of local officers to secure a satisfactory and efficient home branch. In November, 1927, the Wisconsin State Society Journal carried an editorial bearing upon this point, and we quote it to direct attention to the importance of County Society elections:

"The time has long since passed, if indeed it ever existed, when the offices of a county medical society constituted an honor to be bestowed in rotation; or a reward to be received. The realization is here that the county medical society is the very foundation of the state and national organizations. More and more do we appreciate that no state society can be strong without strong county medical societies. And numbers of members alone do not necessarily mean strength.

In numerous societies visited at election time we have been impressed by the evident realization of the members that the offices to be filled were each opportunities for constructive work and that the honor came only as result of doing good work during the term of office. It is no longer a case, for instance, of Dr. Jones nominating Dr. Smith as dele-

gate because Dr. Smith is a good fellow. Today we find the President suggesting that before a delegate is elected he would like to see the hands of those who expect to attend the next annual meeting of the state society. Then when the state society meets, the roll call of the house of delegates shows a representative for that county medical society."

There are several points of interest in the matter quoted. In the first place, mere numbers do not make an effective organization. A review of our records will show that the highest average of scientific matter presented is through some of the medium sized or small counties. Live, thinking, energetic officers determine the quality of a society; men willing to give time and thought to development of a well conceived program for the year. In the majority of instances the success of any society will depend upon its secretary, though the burden should not be imposed upon him alone. A good secretary should be kept in his position by repeated re-elections, but no one man can be expected to devise high grade programs for an indefinite number of years. The president, too often elected for purely ornamental purposes, should take his office seriously and act as guide and promoter in working out the destiny of the organization. But this is no excuse for a secretary "lying down on the job"; if he is unable or unwilling to work, and work industriously, to keep his local society on a plane with those of other counties in his state he ought to make way for an active successor.

Our "County Society Reports" as pub-

lished monthly in the Journal tell the story as to which are active, effective organizations, and which are merely existing; there are a few, not many, of the latter type and they should take steps at once looking to improvement. You—the individual member—can help to improve conditions where they are not what is desired. Look through your file of Journals for the past 2 or 3 years and see whether you have cause to be proud or ashamed of the showing made by your society. Then get busy at the annual meeting; and do not shirk your own share of work if called upon to serve.

Special Article

SOUTHWARD HO!

By C. D. Bennett, M.D.,
Newark, N. J.

Always the lure of the unusual, the unknown, or the wild places is with us. Humanity tires of its routine and craves some new excitement, some new interest, and proceeds forthwith on its quest for something out of the ordinary.

For long, the cry has been Westward Ho, which again was preceded by Eastward Ho. The World War, however, placed an embargo on longitude and the questors for the "different" were forced to consider latitude.

So it came about that the writer's family began to study closely the lands far to the South, became inveigled with the romance and charm of these sunny realms and finally, on February 4, 1928, they left New York on the steamship *Vestris*, bound for Rio de Janeiro.

A cold and cloudy day as we sailed down the harbor, and then the inevitable delayed passenger materialized and we lay at anchor for two hours, off the Narrows' forts, waiting for the missing man.

We could not understand how such favors could be granted but later we found that our missing friend, while a resident of Chicago, spent about half his time in Brazil, was one of the largest importers of this S. S. Line, shipping great quantities of coffee north and only last year sent up on one ship 30,000 turkeys, which arrived in time to be duly labeled "Vermont Turkeys", gracing thousands of our Thanksgiving dinner tables. Such a man was surely worth waiting for. Eventually, like Caesar, he said "Veni" and off sailed

our good ship *Vestris*, down the Ambrose Channel, waved good-bye to our pilot over the cold gray waters of the Lower Bay and turned our prow toward the warmer climes so far away to the South.

Over the next twenty-four hours it were better to draw a veil but after that interval *mal de mer* was a closed incident for the whole voyage. In two days we were in warmer waters. The Gulf Stream was with us and the green floating masses of the Gulf weed were all around us. By the third day, overcoats and wraps had about disappeared. Our officers came out in their white ducks and caps, our deck chairs were well occupied, friends were being acquired and the joys of a long sea trip were well under way.

Our course was laid through lonely seas. We saw one little island off the coast of Florida, one of the uninhabited isles of the Bahama group, but otherwise saw no land for many days, running south on the eastward side of the Windward Islands. Ships also were missing from the scene, only seeing one, a Harrison Liner, which oddly enough was commanded by a nephew of our Captain.

This Captain of ours was a charming old sea dog. We first met him on the second day, as we looked through the cabin doors at a plunging sea and gray sky, and we still think of his kindly face as he came up and shook hands with us and gave us his morning greeting. I had noticed the four bands on his shoulders, which only the Captain and the Chief Engineer can wear and later said to him, "I thought you must be the Chief Engineer" whereat he smilingly replied "I haven't that honor." A typical, modest saying of a brave old Salt. A man whom we learned to respect for his quiet ability, his unflinching courtesy and to whom we became very much attached and whom we now place high among the many friends we acquired on that trip.

By this time, we were among the flying fish and we studied their habits at our leisure. They could "take off" from the crest of a wave, fly about 100 feet and usually ended their flight with a sharp curve, apparently coming up into the wind. Their wings are really side fins and their flying is merely soaring as no motion of the wings is perceptible. They are very plentiful near Barbadoes, and the harbor of Bridgetown was dotted with small sloops, called "flying fish boats" on their way to catch these fish, for they are a popular food and are eaten in large quantities on these islands.

They were served to us on the ship and we found them pleasant eating, resembling in size, appearance and taste our northern smelts.

We entered the harbor of Bridgetown, Bar-

Barbadoes, early in the morning of the sixth day. We were to sail again in the evening so we hastened to the shore. The ship did not block but anchored in the harbor perhaps one mile out and we reached land by the aid of a motor launch. Always, in these tropic ports, the ship would be surrounded by native young men and girls in canoes who kept up an incessant clamor for coins to be thrown into the water for them to dive after. Their swimming ability was marvelous and their vision must have been remarkably keen for seldom, if ever, was a coin lost, and sometimes their fingers would be covered with mud as if they had actually grabbed the coin from the sea bottom.

Barbadoes did not impress us favorably on this visit. The little town was hot and dusty and there seemed to be little of interest to see. We visited several curio shops, bought some postage stamps at the Post Office and then stepped into a motor bus and rode away about two miles to the Marine Hotel. Riding in these public conveyances in foreign places is always interesting. One gets very near the people in this way. The population of Barbadoes is almost solidly black, with of course, a sprinkling of the white controlling race and these black peoples are not diffident. I picked out an end seat on the bus, where I could see and breath better but a colored lady came along and instead of pushing past me and taking an inner seat, she politely asked me to move up and allow her the end seat and meekly I obeyed.

On our return trip we stopped again at Barbadoes and this time gained an entirely different idea of the Island. On landing, a car was waiting for us and soon leaving the town behind us, we drove for hours along winding roads through almost endless plantations of sugar cane, over low hills, from which we would get glimpses of the ocean, never far away and finally reached the other side of the island, and from Hackelton's Bluff, gazed down upon a beautiful bit of coast, dotted with bungalows, the out of town resting places of the city people, and beyond these, the white sands of the beach and a lazy surf beating steadily along this tropic shore.

And then we drove back by other roads, visiting on the way an old English church, where we sat in the ancient pews, read the old inscriptions on the walls and on the tombstones and imagined ourselves listening to the services rendered by a long departed curate and choir.

Later on, we investigated the sugar industry. The modern sugar factories are run by steam power and are not attractive to the casual visitor; but we found an old fashioned

small one where the power came from a wind mill and where practically, all of the work was carried on in the open air. Here we found the negroes feeding long stalks of sugar cane between two large rollers, saw the crushed cane on the other side and the cane juice running in a stream to a near by reservoir from which it was pumped over to the heating vats where, over a slow fire, it was concentrated to a thick syrup, after which it was barrelled and sent to a refinery for crystallization.

There seemed to be little waste. Even the crushed stalks, after being dried, were used for fuel, and for power the Barbadian breezes, the ever blowing trade winds, never fail. All of the workers, men, women and children, were of the colored race although their color varied from a jet black to a shade almost white, and the only really white man in evidence being the proprietor, a typical middle aged Englishman, who, with the utmost courtesy, explained to us the details of his mill.

After a refreshing and slightly "wet" luncheon at the Marine Hotel, we drove to another of the "sights" of the island and visited the Coral Caves, great spaces in the coral rock, worn by the incessant action of the Caribbean waves. They were beautiful but caves are uncanny to the writer and he prefers to stay above ground as long as possible.

Leaving Barbadoes after our first rather disappointing visit we headed almost to the East and when we reached Cape San Roque, the eastern point of South America we were half way across the Atlantic and only about 1000 miles from Africa.

We saw nothing of the Guianas or Venezuela, as the waters along that coast are shallow and we kept about 100 miles off the land.

Keeping our watches on time necessitated setting them back about 22 minutes every day, until we turned the corner, when the process was reversed.

On this stretch we crossed the Equator and, of course, those who were crossing for the first time had to undergo the usual initiation ceremonies at the court of Father Neptune. These included shaving with an immense wooden razor for the men and a ducking in the deck swimming pool for everyone.

Of course, we were now in tropical waters. The saltwater deck pool was almost constantly in use; the thinnest of clothing was popular, days and nights were warm but the trade winds kept the air in motion and the usual deck sports could be enjoyed, despite the heat.

These trade winds are a great blessing to tropical life. They blow constantly in one direction for months at a time, in the early morning at a 5 mile rate, increasing in force

until about noon, when they have attained a speed of what the sailors call "a 15-knot breeze", which brings the white caps all over the blue waters; and then as night comes on subside again to their 5-mile gait. These notes refer, naturally, to calm weather. In the occasional storms the tropical winds are as violent as those of more temperate latitudes.

As we rounded Cape San Roque we searched the eastern horizon for a glimpse of Brazil's Penal Colony, located on a lonely rocky islet some 200 miles off the land but we failed to see it.

Our first landfall was Cape Frio, perhaps fifty miles north of Rio de Janeiro, but we were too far at sea to distinguish details. On the 16th day, we headed into Rio's beautiful harbor, acknowledged by all to be one of the beauty spots of the world. We entered the 21 mile long Bay through a narrow channel, almost under the Sugar Loaf peak and then as the bay broadened out, the city lay before us, with its white buildings shining through the palm trees, with the imposing peak of Corcovado looming like a great hawk's bill over the town, then the Gavea Hills in the near background and beyond, on the horizon, the majestic range of the Organ Mountains.

I doubt if anyone ever forgets that first view of Rio and one had time to study it while we were anchored off the landing, waiting for "Pratique". This inspection consumed about two hours and then we hauled into the dock and debarked on Brazilian shores.

Here we had our first introduction to Portuguese methods. A resident acquaintance brought to us a guide, recommending him as a very honorable citizen, who offered to convey us to our hotel for thirty milreis. This was, by our friend, considered excessive and our honorable native finally lowered his price to twenty milreis, but having in the meantime acquired a distaste for his honor, we spurned his offer and allowed our hotel representative to transport us at his own price of fifteen milreis and we felt that we had shown great wisdom. Later on, however, we made the trip for five milreis.

We eventually discovered that we had reached Rio in carnival time when all regular rates were off and the only rule of the taxi men was to get all the traffic would stand. To this temporary confusion was added the fact that not one of us could speak a word of Portuguese so that had it not been for our American friend, we should have been in sore straits.

But the ride was worth having at any cost.

We passed through the heart of the business section, along the Avenida Rio Branco, Rio's

Main Street, very wide with palm trees along the center of the roadway, which was crowded with trolley cars, auto buses, taxis and private cars, for all the world like our crowded northern streets. The buildings were also very attractive. Rio being the capital of Brazil, the governmental buildings are here and generally grouped on the Rio Branco.

Escaping from the business section this street merged into the Avenida Beira Mar (Avenue of the Shore of the Sea), a truly beautiful parkway which skirts the shore of the bay and the ocean for several miles decorated profusely with palms, statues, monuments and even with the pavements laid in fanciful patterns that were very attractive but a bit trying to a somewhat bewildered head, not then accustomed to a "wet" country.

And then we swung around a sharp point, up a little grade and reached the Gloria—a delightful hotel that would do credit to any of our northern cities. Our rooms were on the fifth floor, facing the city and bay and it was a joy of which we never tired, to watch the busy life of the city and the crowded traffic on the water with the distant hills and mountains for a background, and in the immediate foreground, one of the monumental statues, so numerous in Rio's streets, this one representing Pedro Alvares Cabral, the discoverer of Brazil.

The night views were equally attractive. Rio glows with electric lights and from the Naval Station search light beams were always reaching through the air and then over all were the stars of the Southern Hemisphere, all unfamiliar to us, with the constellation of the Southern Cross always preëminent in its beauty and the unspeakably distant universes of the Magellanic Clouds, overawing us in any attempt to comprehend the mighty distances of space.

We found ourselves at once in the whirl of the Carnival, a joyous time for the Latins, when all laws are relaxed and foolery reigns supreme. The streets were crowded with gayly decorated automobiles with many colored paper ribbons, tying them together, and every night wound through the principal streets wonderful processions of elaborate floats carrying beautiful flowers and beautiful girls grouped in artistic poses or illustrating some famous pictures or statuary group. It seemed as if most of the people were armed with bottles of perfumed water which they sprayed persistently on any one nearby, be they friend or stranger. But every one seemed good-natured and we saw no quarreling.

There was so much to see in Rio that only a few of our explorations can be noted.

The trip to the top of Sugar Loaf Mountain is by suspended cable car. About a dozen of us crowded into the car, one of our party, a lady, losing her nerve and abandoning the trip at the last moment. The car then swings into the air and sails up to the top of a minor peak, about 600 feet up, where we changed to another car and again flew through the air and up to the second peak, about 1000 feet above the city. It really seemed like flying and as we approached the bare granite wall of the Sugar Loaf, owing to the sag of the cables we were apparently about to be dashed against this forbidding rock, but gradually the car overcame the grade; we slid gently into a box-like landing stage, and climbed out for a wonderful view of Rio and its harbor. Underneath us was passing out one of the Royal Mail new motor ships, the Asturias, on her way to the River Plate and it seemed as if we could throw a stone upon her decks, so near and so directly below us was the vessel. We gazed with enchanted eyes upon that panorama before us but finally tore ourselves away, slid down the cables, looking down upon the streets and houses underneath, and reached our landing safely, vowing we must come again.

Another day we ascended Corcovado Peak. This presents its precipitous side to the city, 2100 feet below and we reached this summit by a cogwheel railroad that climbed impossible grades by zigzags and hairpin curves, arriving safely at the top to find a view like that of Sugar Loaf, only more extended and rendered more exciting in that we were above the low hanging clouds which now and then blotted out the city from our view.

Coming down, we left the railroad before reaching the water level, and enjoyed a delightful trolley ride down the mountain and over the old Carioca Viaduct to the city's center. This old viaduct, which reminds one of the High Bridge over the Harlem River, is very old and was built as an aqueduct to bring the mountain water to the city. In later years, the water pipes have been covered and over these artistic arches, plebian modern trolley cars cross this great gorge, connecting mountain suburb with business streets.

There are few of us who do not enjoy flowering plants, and even flowerless plants which have beautiful or unusual foliage, and we had this phase of pleasure well gratified in visiting the Botanical Gardens of Rio de Janeiro.

These, while within the city limits, are miles away from the business districts, and are delightfully placed on a broad Avenida, immediately opposite the attractive grounds and buildings of the Jockey Club, the fashionable

sporting club of Rio, and are backed by the high, well-wooded hills of the granite coast range, and towering over all, the wonderful mountain peak of Corcovado (Hunch-Back).

The gardens are very large, covering many acres and as we entered the gateway between the two small office buildings, we looked up a long, straight pathway, bordered on each side by a magnificent row of Royal palms. What a beautiful vista it was! Probably a quarter of a mile of these majestic trees nearly one hundred feet in height, with their trunks as smooth and polished as though turned in a lathe and at the top of each tree a feathery mass of graceful palm leaves.

These trees are the pride of Rio. They were planted by the order of Dom Pedro, the first Emperor of Brazil, and the story goes that only about one hundred seeds were brought from the old country, the Isle de France, and after this planting, Dom Pedro decreed that the few remaining seeds should be destroyed. He evidently believed that there should be but one line in royalty, either of man or of palms. However, the "best laid plans of mice and men gang aft aglae," as there is one street in the city which boasts of a row of these Royals. They are not the equal of those in the Gardens, and may even have been planted since the Empire ceased to be, but their mere existence demonstrates that even absolute monarchs are not infallible. Halfway up this pathway is a large pool and fountain, with the pool covered with aquatic plants, many bearing flowers, and this vista between the gorgeous trees, with the splashing waters and the glimmering of the sunlight through the waving leaves, made an impression on our senses that can never be forgotten.

It is said of many of the palms, especially of the cocoanuts, that, even in a complete calm, their leaves are never still. So to the visual appreciation was added the soft swishing of the slender leaves, the musical splashing of the waters, the songs of the birds that are so numerous there, and every now and then a gleam of blue in the air as one of those brilliant blue butterflies flashed before our eyes. These butterflies, by the way, are important articles of commerce in Brazil. They are very large and very numerous in protected places such as these Gardens, and their lustrous wings are largely used to mount on the glass covers of powder puff boxes, usually being cut to form pictures of the noteworthy scenery near Rio.

Many other varieties of palms were seen. The city of Rio, it is usually conceded, has more palms than any other city in the world. We noticed particularly the Traveller's Palm, which grows in the shape of a lady's folding

fan and whose broad, thick central stem always contains a supply of drinkable water, which the traveller, thirsty in an arid region, can obtain by an incision. Hence the name. One plant or vine, of which the writer has a small specimen at home, the *Philodendron Toematoso* (common name unknown), we found here growing 50 feet in the air, with its perforated leaves, a foot and more in diameter, and often with its foliage spreading laterally 10 to 15 feet, making perfect screens of living beauty.

The pools of water, with their beautiful water lilies, and the brooks from the adjacent mountains that supplied them; the numerous flowering vines and plants of which the *Bougainvillia* was perhaps the most attractive, the grassy slopes and terraces scattered between the trees, the statues and commemorative tablets of Brazilian heroes, of which so many are seen, not only in the Gardens, but throughout the city, and the very artistic manner in which these beauties, both of nature and of art, were arranged, made the whole effect most charming and unforgettable.

We have only mentioned a few of the charms of the Gardens but practically all the tropical vegetation was represented. Grasses, mosses, ferns, shrubs, vines and trees, all were there. Most of the specimens were labeled so that our visit became not only pleasurable but instructive.

There is always, however, an opportunity for the fault finder. The tropical sun is very hot, and the Royal Palms, although very beautiful, give very little shade, and at our first visit, we had to abandon our explorations at 10.30 a. m. because of the unbearable heat of the sun. So, when you visit this regal place, take the advice of one who has learned by experience and go early, but surely, go.

Another pleasing excursion was to the National Museum, located in the *Quinta de Boa Vista*, the charming old residence of the Brazilian Emperors. The grounds and gardens are kept in superb condition and are a joy in themselves and the Museum illustrates in great variety the natural history of the nation. The writer was especially interested in studying the human heads that had been reduced by the artisans of savage tribes so that an ordinary adult head was brought down to the size of an orange, yet with every feature perfectly preserved with the long hair of the Indian still remaining on the scalp. No incision was visible and the effect was that of a perfect miniature.

The Orinoco Indians have another modification of this custom which is even more ex-

hilirating. They take their captives and, one by one, remove all the bones of the skeleton from the body, at the same time shrinking the soft tissues so that the final product is a flabby, limp caricature of the man operated upon, somewhat resembling the long limp dolls now so popular in our city stores. The especially interesting feature of this procedure is that, so far as possible, the bones are removed while the victim is still alive and, of course, without anesthetics. We saw, however, no specimens of this high class surgery.

Several times we visited the flower market located in the heart of the city and occupying a whole square between streets. Here were all the floral beauties of the country—orchids, roses, lilies, and indeed, practically all the flowering plants that would grow in a warm climate, and all at moderate prices. We purchased a beautiful bunch of *Cattleya* orchids for 35 cents and a superb bouquet of *gardenias* for the same amount.

Time and space forbid too much detail. Only a few of the beauties of Rio have been noted. It would be pleasant to tell of that famous retail shopping street, the *Ouvridor*, only 10 feet wide, where no vehicles are allowed; of the stores selling Portuguese antiques and old furniture; of others showing wonderful weaves of cloths, silks and linen; of the curio stores with their walls hung with enormous snake skins and their counters crowded with the gorgeous blue butterfly compacts; of the fruit and candy stores showing strange and luscious temptations for every taste; of the lottery ticket salespeople everywhere and always importuning you to take a chance; of the taxis, the buses, the trolley cars, all suggesting alluring enticements to explore distant and perhaps stranger parts of the great town; of the pavements, a study in themselves, with their strange and weird mosaics; of the beautiful public buildings, municipal and national; of the famous *Oswald Cruz Institute* where originated the sanitary measures that have transformed Rio de Janeiro from a world-known "pest hole" to one of the healthiest cities of the world; of the numerous statues and monuments wherein is memorialized so much of Brazil's history; of the charming pleasure resorts in the harbor of which *Paqueeta Island* with its picnic groves, its bathing beaches and its sylvan paths, stands preeminent; of how enjoyable were the plebeian trolley rides among the real people of the land, twisting through the streets of the rich and the poor, past the market places of the lowly and the palaces of the mighty. Incidentally the trolley fare seemed enormous—400 reis—

until you learned that this meant about five cents of United States money.

But enough. Pause and dream again.

Too rapidly our time passed and we boarded our good ship "VanDyck" and steamed out of the bay in the evening, looking back longingly at the illuminated avenues and homes of one of the wonder cities of our earth.

On the third day we ran into Pernambuco, a rather forlorn town on the eastern coast of Brazil and a great contrast to Rio. The town is on a low, flat island and a drive of two hours showed us all that we cared to see. The landward side of the city is intersected by numerous lagoons, where miserable huts housed the natives in mud and squalor with seemingly everything favorable to develop malaria and all filth diseases. We did see one interesting exhibit here and that was a little boat which they call "barrancas" and which consisted of logs about ten feet long lashed together as a raft and with no other protection than a flimsy rope rail for the crew of 2 men. However, under their own sail, these boats cruised the open sea after fish and we passed one of them 8 or 10 miles off the land, running along in a heavy sea, their raft deck all awash and the men, of course, in water soaked clothing and from their low elevation, undoubtedly out of sight of land. It seemed a hard way to make a living and the opinion was expressed that many of these fishermen were washed off their boats, never to return.

Rounding Cape San Roque but not seeing it, we headed for Barbadoes, which we have already discussed and then on to Trinidad, entering the harbor through the Dragon's Mouth. We found Trinidad a beautiful island and, owing to the excessive dampness, the tropical foliage was superb. We enjoyed a ride through the adjacent country, a good dinner at the Queen's Hotel, and then away again for our home port, getting a glimpse of the Venezuelan mountains as we passed out to sea.

Awaking at 3 a. m. we found ourselves just passing Martinique with its three mountains, including Mt. Pelee and saw the flashing lighthouse at a harbor entrance and at 7 a. m. we were just reaching Guadeloupe. And then, all of that enchanting day we coasted along these beautiful leeward and windward islands, so near that we could distinguish people walking, passing Nevis, Antigua, Dominica and a host of lesser islands, getting now and then a glimpse of the open Atlantic, rounded Saba Island as dusk came on and about 11 p. m. passed the islet of Sombrero with its guarding lighthouse, broke through the chain of islets,

passed the Virgin Islands and away on the open sea for New York.

This was one of our great days and all day long we listened to stories of these lands while we feasted our eyes on their tropical beauty.

But the chapter is closing. Northward we sailed, safely passed the vexed Bermoothes, picked up the Jersey coast and later on our pilot and evading our alcoholic coast guard, reached our dock to be with friends and home again. A pleasant ending of a delightful cruise.

Medical Ethics

STANDARDS OF PERSONALITY FOR PHYSICIANS

(Editorial, N. Y. State Med. Jour.,
Jan. 15, 1928)

Who is the ideal physician, and by what standards shall he be measured?

Physicians form an honorable brotherhood, and among them there is a common bond of interest and fellowship, and a high ethical standard. Physicians meeting one another as strangers soon become acquainted as they mutually share a fund of knowledge and experiences which are hidden from the uninitiated.

Medical brethren come to know one another more intimately than the members of any other profession. Their work brings them into close contact with people in times of sickness and trouble when the afflicted confide their secrets to the doctors and nurses, and when one physician must often rely on the friendly assistance and support of another who is his keen competitor. It is to the honor of the medical profession that physicians meet the tests in nearly every instance; and that a departure from the high standards of brotherhood and ethics is the great exception.

Whence come the friendliness of the doctor, his coöperative spirit and his high standards of ethics? Is it because of his training, or is he born into the high estate of a family doctor?

The doctor is both born and made. The first test of candidates for their fitness to study medicine begins at the door of the medical school where the applicant must present evidence of fitness along the lines of preliminary education and character.

The preliminary education that is required

is far more than the possession of facts transferred from books to the pages of memory. It involves skill in methods of scientific research, for the future student and practitioner of medicine will be an investigator into the nature and causes of sickness, and must read a confusion of conflicting signs which are not set forth in books.

A medical student's preliminary education also involves skill in forming correct conclusions from given facts, and in applying those conclusions so as to affect human actions. The medical practitioner must be more than a cold scientist who adopts a "take-it-or-leave-it" attitude toward his patients; and on the other hand he must avoid trimming his conclusions to fit the wishes of his patient.

Mental traits usually show themselves during the student's premedical course, and those students with gross deficiencies will be excluded from the medical school. While in former years practically every applicant was received into a medical school, only 1 out of 5 is now permitted to enter upon the study of medicine. This limitation of students to those of like mental traits is one of the great reasons for the present harmony among physicians.

Certificates of character are also required from applicants to enter a medical school, but character is an elusive condition, for it has an element of temperament as well as a moral quality. A student in the premedical school reveals his moral qualities by his social adaptabilities; but he is not subjected to tests which reveal his less evident temperamental qualities. The student with the one-track mind and cold logic slips in beside the timid one who fears to make a decision. Temperament enters into success or failure so frequently that one regrets the inability of the medical schools to determine it before the student is permitted to study medicine.

The second great test of a candidate for the practice of medicine comes at the hospital at which the newly graduated doctor seeks an internship. The question of his preliminary education is usually shown by his diploma of graduation from his medical school, and a good moral character is also assumed, but the question of temperament becomes an important issue. Here for the first time in the student's career the embryo doctor is subjected to a severe test of his power of adaptability to the wishes and feelings of others. His work compels him to be intimate with his patients, his visiting staff, and his intern colleagues; and whether he wishes it or not, he must give grave consideration to the effects

of his actions on everybody with whom he comes in contact. He must adapt himself to the whims of the sick, to the petty peculiarities of the visiting staff, and to the rough and ready jibes of his companions. These very same conditions he will meet in his private practice, and the wise intern will adapt himself to them at the outset. The value of an internship consists in the training in adaptability as well as in scientific medicine.

Hospitals are laying more and more emphasis upon temperamental adaptability as a qualification of their interns. It would seem to be easy for a fine medical student to secure evidence of his adaptability from some practicing physician who knows him well, but frequently the best men go through a medical school without forming the intimate acquaintance of a doctor. The preceptorial system was too valuable ever to be discarded. The old doctor showed his student how to adapt himself to his patients and to the leaders in the community; and when the graduate sought a testimonial of fitness, that from his preceptor weighed more than all others. It will well repay every medical student to form the intimate acquaintance of some doctor in the practice of medicine.

The third great test of a physician comes in the county medical society after he begins his medical practice. The medical school has ground and polished his intellect, and the hospital has screened out the grosser imperfections of his conduct; but his temperament remains, and is likely to assert itself in its true aspects when the inhibitions of his training career have been removed.

The county medical society is the physician's medical school and internship; and whether he takes it or not will depend largely on his temperament. Some physicians are instinctively unsocial, and see no need of the county medical society. Others are satisfied with their present knowledge, and see no pecuniary returns from continued study. And so less than three-fourths of the physicians of New York State avail themselves of the benefits of the county medical society. Actual criticisms of the societies are now seldom heard—the non-members seem to think they are doing well enough without the giving and receiving of benefits which the society offers.

Temperament also asserts itself among the members in the society. Fortunate is the county medical society in which a few members have a civic spirit, and delight to arrange programs, to teach their fellows and learn from them, and to discharge the civic duties

which the medical profession owes to the community. The successful officer of a county medical society is one whose temperament enables him to put himself in the place of his fellow members, to appreciate their line of thought, and to develop plans which appeal to the great majority of the physicians of his county.

The county medical societies of New York State are making increasing appeals to physicians of all temperaments as they expand their activities beyond those of science and economics into social and educational fields. The county society offers benefits to physicians of every temperament.

Medical Economics

"HE ALWAYS TAKES TIME TO BE THOROUGH!"

By Harriet Henderson

(Reprinted from "Medical Economics,
January, 1928)

In every department, life is at high tension. Speed is a characteristic of the age.

A physician must work fast not only in the operating room but everywhere. The big city, especially, demands high speed. Its rush is ruthless, breakneck.

But here and there even in the heart of the city are wide, green, quiet places where one need not hurry.

Such peaceful places linger in the memory. They are passed on by word of mouth from friend to friend and are sought for.

Now and then an individual emanates this same restful impression. Such an individual, also, is passed on by word of mouth from friend to friend and sought after.

"No matter how busy he is, he's never hurried or flurried. He has a big practice but you are never hurried through a consultation or treatment. He always takes time to be thorough."

This was the description of a busy doctor that was passed on to me and I sought him out.

"How do you manage," I asked, "to take care of such a big practice and never seem hurried—always have time enough?"

And this is what he told me.

"Hurry is an attitude of mind. You know

the wise Ben said: 'Drive your work but don't let it drive you'.

"For years I've tried to cultivate an unhurried attitude; to be always in control of my work—to never let it push me.

"I couldn't do this without concentration, and so when I have a patient in consultation or under treatment I try to shut out from mind my waiting room. I want to give my whole attention and time enough for thoroughness to whatever is in hand.

"We encourage people," he went on, "to come in and make an appointment, or to call up for an appointment, and we try to carry out this schedule of seeing them as closely as possible. But my patients know my methods and they will wait an hour—or two, or three if necessary—or go home and call again, for they know when it comes their turn they'll get this same concentrated attention that each one gets.

"I couldn't do justice to anyone if I didn't shut out everyone else for the time being and I couldn't do justice to myself or my patients if I was hurried. I'd rather send them home and quit for the day."

"Does that ever happen?" I asked.

The doctor laughed. "Now and then," he said, "when I'm too tired to do my best for the number waiting I send them away, but I try to avoid that through systematic work."

I had noticed the several little treatment rooms opening from a long hall. The office is a re-made part of a large old residence. A modest sign leads strangers through a side door to a waiting room with restful gray walls and no clutter of furnishings or clash of colors; not even a medley of more or less ancient Literary Digests and other magazines. I can even remember the few pictures, all in simple balance.

A dull-finished table held a lamp and some of the "little leather-covered library". I looked over a recent copy of Hygeia that was on the davenport, and before my turn came the last Post had been handed in.

If you have an appointment you go in by the front door and straight down the long hall, so that the waiting-room people don't become jealous of your precedence.

Back of the quiet, handy office is the personality of the physician. Just as many persons communicate their bustling rush both to people and places, he has communicated his leisurely attitude.

The doctor marks you down in his memory, and if you become a patient he marks you down in his card file. Best of all he marks

you down in his friendship. He could not be happy, he says, unless his patients were his friends; which perhaps is the reason he feels his practice is a recreation more than anything.

And after all isn't this one of the chief differences that we hear cried about as existing between the old-fashioned family practitioner and the modern city doctor? The former made a friendly visit out of his professional call; he was interested in all the little things that made up conversation in those days, and his patients usually weré friends of long standing.

Today the physician sometimes seems to be running too much toward brisk efficiency, turning the patients out of his office as fast as his snappy, efficient methods allow, and spending as little time as possible in conversing about this and that. Patients like to linger, even though they may not have been over-anxious to come.

Of course there are extremes both ways. It is hardly advisable to make a gab-fest out of a medical visit, but neither is it advisable to watch the clock too sharply.

To me, a layman, it seems that if patients must be dealt with swiftly in order to maintain a proper income, then the fee schedule ought to be increased and the routine slowed down. In fact, I shouldn't wonder but what the secret back of many a "specialist's" success was that he specialized on cultivating patients' friendships.

Esthetics

"FOR LO! MY OWN SHALL COME TO ME"

(From Kalends, Williams and Wilkins Co.)

Had John Burroughs written no other poem than "My Own Shall Come to Me", he still would be considered one of the most pre-eminent of the poets of America. In all universal literature there can be found no greater lines than his assertion, "I stand amid the eternal ways," and his enquiry, "What matter if I stand alone?"

It is thus that the finer instincts of man prompt him to perceive truth and beauty, fitness and harmony, wheresoever they may be found. The higher these instincts are developed, the greater the man. In fact, a man merely begins to be a man when he ceases to revile and whine against circumstances, and begins to appreciate what Huxley calls the "absolute justice of the system of things." When a man begins to adapt his mind to this

concept, he ceases to accuse others of being responsible for his low estate, ceases to rail against his environments, and endeavors to utilize the obstacles in his path as but stepping stones to things higher.

No matter how drab and drear life may seem, we should meet it and *live* it; of what avail to shun it and call it harsh names, for in the last analysis it is not nearly so bad as we are. The dominant principle of the cosmos is law, not chaos; the source of the milk of human kindness is love, not hate and suspicion; and the progress of the world is sustained by justice and truth, not injustice and hypocrisy. Therefore, when a man *rights himself* he will find the universe is right, and as he alters his attitude and thoughts toward others so will the thoughts and attitude of others alter toward him.

Truly are poets such as Burroughs and Whitman prophets of humanity. They reach after and always foresee the ultimate good; ever visioning the paradise to be, painting the millennium to come, and restoring the lost image of God in the human soul—an image too often lost in a maze of ritualism, a morass of dogmatism, and a fog of ages-old superstition.

MY OWN SHALL COME TO ME

Serene I fold my hands and wait,
Nor care for wind, nor tide, nor sea.
I rave no more 'gainst time or fate,
For lo! my own shall come to me.

I stay my haste, I make delays,
For what avails this eager pace?
I stand amid the eternal ways,
And what is mine shall know my face.

Asleep, awake, by night or day,
The friends I seek are seeking me;
No wind can drive my bark astray,
Nor change the tide of destiny.

What matter if I stand alone?
I wait with joy the coming years;
My heart shall reap what it has sown,
And gather up its fruit of tears.

The stars come nightly to the skies;
The tidal wave comes to the sea;
Nor time, nor space, nor deep, nor high
Can keep my own away from me.

The waters know their own and draw
The brook that springs in yonder heights;
So flows the good with equal law
Unto the soul of pure delights.

—John Burroughs.

Observations from the Lighthouse

PERIODIC HEALTH EXAMINATIONS

Among all the epigrammatic titles used to catch the public interest in the matter of prolonging life, none is so concise and neat as that ascribed by J. H. Musser (*New Orleans Med. & Surg. J.*, 80:352, Dec., 1927) to Dr. William D. Haggard, who gave to his address on this subject before the Louisiana State Medical Society the caption, "How to Add Years to Life and Life to Years". In concluding, the speaker said: "Neglect your business if you must; neglect your golf if you can; neglect your wife if you dare, but don't neglect your physician and a yearly physical examination and health inventory on your birthday."

In presenting a historical résumé of the development of the periodic health examination idea, Dr. Musser credits Dr. Horace Dobell with first pointing out, in 1861, at the Royal Infirmary for Diseases of the Chest, in London, the necessity for frequent examinations, so that slight deviations from normal health, which are commonly not considered of much importance, might be recognized early and measures taken to prevent their becoming advanced pathologic lesions. Dobell urged that there should be instituted as a custom a system of periodic examinations to which all persons should submit themselves and their children. Despite this earnest plea, no further effort was apparently made by the medical profession to encourage such a yearly check-up until 1900, when Dr. George Gould addressed the A. M. A. on this subject. His views received hearty endorsement, but still no action was forthcoming. In 1909, Dr. Foster recommended that policy holders in insurance companies be given the opportunity to be examined every 5 years, and this provision was adopted by the Provident Life Insurance Company. In 1911, other life insurance companies were urged to extend this service to their policy holders by an appeal to the actuary of one of the large companies. In 1914, Dr. Goldwater instituted yearly examination of employees of the New York City Health Department, and in the same year the Life Extension Institute was launched in order to provide an organized service of physical examination. With the founding of this institution and with the awakening of the medical profession throughout the country, the propaganda in favor of this type of examination became much more widespread. Many large institutions offered to their employees the service of the bi-yearly examinations. The Army and Navy, at the instance of President Roosevelt, had already required annual examination of all officers, and, in 1922, the A. M. A. went on record as endorsing the movement wholeheartedly and has put its shoulder to the wheel with great vigor in order to encourage the general acceptance of the idea of a periodic health examination for every person. At present, public health organizations, state and county medical societies, insurance companies and other groups are enthusiastically

endorsing the medical profession's campaign of educating the public to the benefits of a yearly survey of the body's needs and misdeeds.

Despite all that has been done, however, the average physician looks with a certain amount of skepticism upon these examinations and the general public has failed to take advantage of this measure which qualified medical men felt would be of tremendous benefit to the individual. Although the Metropolitan Life Insurance Company offers to its enormous number of policy holders free yearly examinations, only 2.5% have taken advantage of this privilege. Organized routine physical examinations are made in many public as well as private schools, colleges, universities and many governmental services, but the adult individual who on his own responsibility requests such examinations is an exception.

In discussing the need of these examinations, Musser points out that the comparatively recent increase of 15 years or more in life expectancy has been accomplished through the reduction in infant mortality—in 6 years alone a reduction of 25%—brought about by the control of acute infections and contagious diseases, and by public health services which have turned their attention to the supervision of milk and water supplies, campaigns against tuberculosis, malaria, hookworm and syphilis. All these organized communistic efforts have added years to the expected life span of the small child but they have added little, if any, to the life expectancy of the individual past 40 years of age—the individual who is subject to the degenerative diseases of midlife. These are the disorders which, if discovered early, may be prevented or at least materially delayed in their progress. They are often due to faulty habits which a thorough examination would discover and correct. Even when the manifestations of pathologic change have appeared, it is sad to relate that the average physician will confine himself to that organ which is dysfunctioning. Dr. Frank Billings says that the greatest curse of the medical profession is the failure to make a thorough physical examination. "I have always been struck by the fact," he writes, "that patients who stripped (for such an examination) did it reluctantly, and later remarked that they had never been unclothed for an examination before; so for 2 years I gave my secretary every night the number of new patients who had never been disrobed for an examination. Over 75% of the total number, members of doctors' families included, had never had their clothes off in an examination, and every one suffered from a chronic complaint."

In indicating the scope of the examination, Musser cites the form which has been issued by the A. M. A., one side of which contains questions to be answered by the individual, and the other the "irreducible minimum" of the record to be filed by the physician for future reference. These will constitute a yearly chart that will be invaluable in case of subsequent illness.

Musser believes that in children to the age of 12, these examinations should be carried out regularly every 6 months; between the ages of 20 and 40, every 2 years; after the age of 40, every year. When an individual has passed the age of 50, he recommends that, in addition, the blood pressure should be taken, the heart auscul-

tated and the urine examined, chemically and microscopically, every 6 months.

It is appalling to read the number of preventable defects revealed by the examination of men for the draft. The most valuable statistics for individuals more advanced in years are those of Drs. Dublin and Fisk, who report on a series of nearly 17,000 white males, presumably normal, who were examined in the year 1921. The summary shows that nearly all of them reported errors in personal hygiene; 20% suffered from faulty posture; 16% from flat feet; 13% from overweight; 30% from defective vision; 26% from septic and buried tonsils; 14% from faulty dentistry; 14% showed thickening of the arteries; 20% had elevated blood pressure; 40% suffered from chronic constipation, and 22% had urinary abnormalities.

It seems to Musser that the necessity for periodic health examinations is too obvious and pertinent to require much delineation to a medical audience. He recommends that physicians themselves conquer the enemy of procrastination which in this event may cost them dear.

Periodic Health Examinations in the Prevention and Earlier Recognition of Cancer and Other Serious Diseases

"Is seems strange," says Joseph Colt Bloodgood (New Orleans Med & Surg. J., 80:346, Dec., 1927), "that the profession of medicine is really so late in either practicing or preaching the fundamental importance of periodic examinations". He then reviews his records of more than 25 years, with special relation to their bearing on the early detection of cancer of the breast, uterus, abdomen, oral cavity, skin and bone.

Breast.—A woman who had been operated on in 1897, by what was then considered the very radical Halsted operation for cancer of the breast, returned in 1898 for examination. A beginning retraction of the nipple, not present at the former examination, was discovered in the remaining breast, accompanied by a slight thickening of the breast tissue. The complete operation was done next day and the microscope disclosed a very early cancer in the center of the breast, not larger than a pea; no cancer cells elsewhere in the breast or in the axilla. The first operation was for a tumor in the breast known to have been present for at least 6 months, and, after complete extirpation, cancer cells were present in all the axillary glands. The striking fact is that this patient is living today.

We have positive evidence that if patients report for examination within 2 weeks after discovery of an abnormal breast condition which proves to be cancer, and the complete operation is performed, the chances of recovery are 70% and more. We also know from insurance statistics that 1 to 2% of women over 30 develop cancer of one breast. This percentage increases slightly as the age advances, reaching its height perhaps between 40 and 50 years. A woman who has had the complete operation for cancer of the breast, no matter how favorable her condition, runs about 10% chances of recurrence in the remaining breast. If women who have been operated on for cancer in one breast will return for examination every 3 months for the first year, twice a year for the next 5 years, and then once a year for the remainder of their lives, their chances of permanent cure, should cancer

start in the remaining breast, are far better than after the first operation; figures in the John Hopkins Clinic show this.

Now that women are educated to seek examination the moment they are warned by suspicious breast conditions, the trouble has proved to be nonmalignant in 75% of cases in Bloodgood's own clinic since 1920. Previous to 1900 only 20% were nonmalignant. In the practice of any surgeon or clinic in which the follow-up system is working, every woman who follows advice will be protected from future breast trouble by the periodic examination. In 25% the patient will have been operated on for cancer; in 25% a benign tumor will have been removed from the breast, and in 50% no operation will have been necessary. The periodic examinations established by Halsted, in 1895, in his clinic for breast cases are without doubt largely responsible for the increasingly fine results among the patients of surgeons influenced and trained by Halsted. Our British colleagues give the Johns Hopkins Surgical Clinic credit for the best record and the best results in the world. We believe that the 2 factors most responsible for this enviable attainment are the complete operation, as devised and practiced by Halsted, and the yearly periodic examination. Letters have gone out to patients of this clinic and their physicians since 1895; even during the war this was one of the activities of the surgical pathologic laboratory of the Johns Hopkins Hospital which continued to function.

One other fundamental conclusion is that in those clinics in which the percentage of malignancy is less than 50 and approaching 25, the physicians and surgeons are becoming far better diagnosticians. Their ability to distinguish, by touch of the fingers, between the definite and the indefinite lump is rapidly improving.

Uterus.—Bloodgood's records show that the percentage of 5 year cures in cancer of the breast is larger than in cancer of the uterus. We all know, he says, that cancer does not begin as cancer. There is always something else first that is not cancer. Therefore, if we can get patients to come to examination before the condition becomes cancer, we can offer positive prevention. This seems possible in cancer of the skin and mouth, but in the breast and in the cervix of the uterus the evidence of precancerous condition is often lacking. In cancer of the cervix the distance between the point of origin and the point to which, if the cells migrate, there is no hope of cure, is so much shorter than in cancer of the breast, that the chief hope of further reduction of incurable cancer of the cervix rests upon periodic examinations.

Within the Abdomen.—Although we have educated the people and the profession to the dangers of appendicitis if operation is delayed, we have as yet made very little impression on them in regard to those diseases within the abdomen which are chronic. Most patients suffering from acute disease within the abdomen send for their doctor the moment they are warned, and thus their lives are saved. When a death occurs from appendicitis today, someone has blundered.

Cancer of the abdomen is one of the chronic diseases. Its early symptoms are not urgent so there is delay in seeking medical advice. Records show that the first cases of cancer of the stomach and colon which were cured by operation were those which quickly produced obstruction.

tion, giving rise to such acute symptoms that the patient and physician were forced to seek the hospital for what was called "obstruction of the bowel". Then at operation the early obstructing cancer was found and removed, with the result that most of these patients are living today, some more than 25 years since operation. Unfortunately, obstruction with cancer usually comes too late for effective treatment. Periodic examinations will have a tremendous influence for good in these cases, for at such examinations indigestion will be discussed and the public will be educated to know that when they are warned by any type of indigestion there must be an immediate Roentgen-ray examination of the stomach and colon. If the lower bowel is involved, this must be accompanied by actual inspection with the proctoscope. Today we have the means of locating trouble within the abdomen, and we have surgical operations for relieving these troubles, but in the majority of instances the third factor, the patient in time, is conspicuous by its absence.

Oral Cavity.—There is no better proof of the preventive value of periodic examinations than in a study of the causes of cancer within the mouth. In a review of all the records of diseases of the oral cavity in the surgical pathologic laboratory of the Johns Hopkins Hospital which have accumulated since 1899, the 2 most striking facts in every case of cancer of the mouth are: (1) that the patient had never had proper dental treatment, many never having seen a dentist, and (2) that tobacco in one form or another, including snuff, had been used continuously. Ragged, dirty teeth and neglect of ill fitting plates were contributory causes.

Tremendous progress in reducing the number of cases of cancer within the mouth has already been made by dissemination of correct information in regard to teeth and tobacco. The records which form the basis of this study show that up to 1900, more than 50% of cases of cancer of the oral cavity were inoperable; today the percentage is less than 5. Before 1900, cures averaged less than 10%; today cure is effected in 60% of cases. Up to 1900, in less than 3% of cases was the lesion seen in the precancerous stage; now more than 75% are seen in the preventive stage. This progress is largely due to the habit acquired by the public of periodic examinations by their dentists.

Skin.—No one should die of cancer of the skin. The great fundamental fact on which we base the hope of eradicating cancer is the fact that cancer never begins as cancer. There is always a local lesion first that is not cancer, and in the course of a periodic health examination this lesion will be seen and felt long before cancer starts. The obstetrician should at birth make a note of the skin defects of the infant and tell the mother if any of them should be removed immediately or later. If neglected, a hemangioma may grow to such size that cure is difficult if not actually dangerous. Pigmented moles should be removed before the age of 20, and there are other skin defects and palpable tumors that will be disclosed by thorough examination

Later in life the appearance of a new skin defect of any kind should lead to immediate examination. When periodic examinations are in vogue these defects will always be revealed and

those that have dangerous possibilities will be properly removed. The most difficult part of the problem is to teach the doctors what kind of skin defects should be removed, and to teach the public that these little moles, warts and other types of skin defect are best treated by complete removal, under local anesthesia, with a knife or in some instances the cautery, leaving practically no scar. Surgeons must also bear in mind that these little skin lesions must be given a good margin of healthy tissue, so that enough has been done should the microscope reveal the beginning of cancer.

In cancer of the skin, as in that of the mouth, irritation is one of the principal causes. Cleanliness and soothing applications in case of irritation are effective means of prophylaxis. Of special importance is the instruction of the obstetric patient in relation to care of the nipples.

Bone.—We have been very slow in recognizing the importance of taking a roentgenogram of a bone or joint immediately after a slight injury, or at once when pain, swelling or tenderness develops, or in case of a limp, a slight contraction, or any loss of function. Such symptoms are too often referred to "rheumatism" and treated with medicine, whereas immediate examination with the Roentgen ray offers the best chance of cure, whether the trouble is cancer or not. Delay of even a few weeks increases the danger of death if the bone disease is cancer, and of loss of function if the disease is not cancer. Periodic examinations will be helpful here in giving the correct information because one would not take a roentgenogram of the entire skeleton as a routine procedure.

Discussing the ultimate benefits of periodic health examinations in general, Bloodgood expresses the belief that women will finally be better insurance risks than men. Their maternal instincts make them more sensitive to the protection of their children, and of themselves for the benefit of their children. Women today are reacting better than men to the correct information given them by the medical profession. The percentage of hopeless cases of cancer of the uterus and of the breast is rapidly declining, while the percentage of cures is rapidly rising, and more women who have had trouble with breast or uterus are coming under the protection of periodic examination. More women attend the lectures and more read the literature.

So far the benefits of periodic examinations are best illustrated when we study the records of any great clinic of this country and learn what has happened to those groups whose diseases have so interested some member of the clinic that the patients have been written to once a year and advised to see their physician or to report to the clinic. Periodic examinations are the logical result of a follow-up system, and a follow-up system was one of the great beneficial results of the introduction of science into medicine. It was only the scientific members of great medical faculties who became interested in what happened to their patients after they left the clinic or hospital. The best answer to the statement that has been so frequently made for years, that scientific medicine was not practical, is that scientific medicine developed the follow-up system and that it is now behind periodic health examinations.

In Lighter Vein

"What kind of a store is that fellow over there at Toad Rock running?" "Well, he has Ford parts for sale," replied the attendant in the filling station, "buys butter, eggs and poultry, deals in real estate, paints houses, marries folks in his office, sells stamps, hams and molasses, I reckon you'd call it a drug store."

What is the effect of alcohol upon the body? "It destroys a man's stability, increases the tendency to Translational and Rotational moving by removing the center of equilibrium to point outside the body."

"Hey Bill, your doctor's out here with a flat tire and he wants to know what it's going to cost him," announced the garage owner's assistant. "Diagnose the case as Flatulency of the Perimeter and charge him \$8.00," came the reply.

Jack—"Why did they kick that medical student out of the Library, Tom?" "They caught him trying to remove the appendix from the book he was reading."

Official prominent in the councils of the Southern New Jersey Chicken Raisers' Association says the coal strike will make the price of broilers higher this year, and while we had not anticipated this added blow, we are not greatly surprised. It has cost more, of course, to provide them with the steam-heated apartments to which they have become accustomed.

The Very Idea

Old Gentleman (to old apple woman)—No, no, my good woman—very nice, but you mustn't tempt me.

The Lady—Oo's a-tempting yer? D'yer think this is the Garden of Eden?—Humorist, London.

Not Sarcasm

Husband (loaded with luggage, at railway station)—I wish we'd brought the piano, dear.

Wife—Don't try to be funny, George!

Husband—But I left the tickets on the piano! —London Tit-Bits.

English Humor

It was late in the evening, and he was tired of being accosted by the many street hawkers.

The last straw came when a flower-seller stopped him with, "Snowdrops, sir?"

"I always knew it did," he snapped, and strode on.—Tit-Bits.

Height of Happiness

Emily: "I am the happiest woman in the world. I am marrying the man I want."

Winnie: "Oh, that's nothing. True happiness comes to a girl by marrying the man somebody else wants."—Tit-Bits.

Lay Mirror Reflections

SIGHT-SAVING WORK

(Editorial N. Y. Times, July 3, 1928)

In the twentieth anniversary report of the National Society for the Prevention of Blindness, just published, there is much to praise. The achievements of a score of years are set forth in simple language which any one can understand. That the public should know what has been done, in order to cooperate with further efforts, is essential to get the best results. It is good to know that the principal causes of blindness have been reduced enormously since the handful of public-spirited men and women who formed the society began their work. The chief cause of blindness in schools for the blind—babies' sore eyes—has been lowered 64%. Sight-saving classes have been formed in great numbers, and lectures, pamphlets and other instructive plans have been used to teach men and women in hazardous industries how to safeguard their vision.

This is a fine record. The society hopes to better it in the next few years, and will be able to do so if the public helps. Science promises complete eradication of babies' sore eyes as a source of blindness. The statistics of the American Foundation for the Blind on this disease in schools for the blind indicate that the incidence for 1927 was 9.5%. While the directors rejoice at this striking improvement, they will not be satisfied until every state makes provision for the distribution of silver nitrate to physicians and midwives. There are still 13 states which do not require attendants to use prophylactic drops in an infant's eyes at birth.

A less technical subject, and quite as interesting to parents, is the effect of sunlight on babies' eyes. Since sun baths are strongly advocated as a preventive of rickets and tuberculosis, the problem of protecting the child's sight from strong light has arisen. A group of nationally known pediatricians and ophthalmologists who were consulted announce that babies are not so stupid as some adults. They close their eyes when the sun is so bright as to cause deleterious effects. A child should be placed with the light streaming over his head from the back and, even if he is lying almost flat, his eyes will be sufficiently shaded by his own forehead.

Physicians in the pre-school eye clinics have discovered methods of testing the sight of children too young to read the printed charts. It is the early diagnosis that most counts, and the spread of pre-school examination has saved the sight of hundreds of children. Those whose vision is found to be seriously defective are placed in sight-saving classes, where they are able to get the same education as normal youngsters and at the same time are taught how to conserve their eyes.

GROUP PRACTICE OF MEDICINE

(Editorial N. Y. Times, July 7, 1928)

Though Dr. William J. Mayo is one of the world's foremost exponents of the group practice of medicine, he does not look forward to the disappearance of the general practitioner. In his address before the National Education

Association he said that the physician is no longer an individual practitioner, however general, but must turn to one or another specialist for the information which in the nature of things a single individual cannot have of all that medicine has learned. He would need several lives to attain that competency, and even then collective knowledge would surpass his own.

Dr. Joseph Collins has in the current Harper's set forth in a clear and convincing article the need of such organization of specialized skill in the field of medicine as will insure to patients the advice of the highest diagnostic service and most approved treatment, whatever their ailments may be, at a cost which they are able to meet. Great progress has been made in the training of physicians. They are as well taught in America as in any country of the world, but when they persist in practicing medicine individually they fail of their maximum possible service. As it is, the poor, or very poor, do in most communities enjoy the advantages of group practice through the clinic or hospital in which specialists are associated. Those of ample means may also have such advantages, but, except in such institutions as the Mayo Clinic and the medical centers now developing, only by going from one specialist to another. The man who is neither rich nor poor is "often denied the medical service to which he is entitled because he cannot afford it," but could have within his means if group practice were organized in some such way as Dr. Collins suggests:

He would go to the consulting rooms and laboratories. Here he would be received by a discerning, affable person who would seek to get enough information about his symptoms to lead him to the appropriate hopper of the medical mill. Before he is taken there it should be ascertained whether he is a wage-earner or a wage-payer. If he is a wage-earner, the firm should then and there collect the equivalent of one week's salary. If he is a wage-payer, \$100 should be collected with similar dispatch, and he should be told that he may anticipate supplementary charges should his case require extensive investigation. Then the patient should be given an appointment with a member of the firm in whose province the symptoms would seem to be, who would examine and pass him on to as many others as are necessary to get a complete report. The patient is now ready for the verdict. The man who gives it to him should know not only the disease but the diseased and he should always have in mind that man's fears are magnified by illness, his hopes minimized.

The ideal way would be for the physician to have his own laboratories and assistants in such number as to cover the field of his practice, but this is impracticable. It must be constantly kept in mind, however, that, with all the organization, the service must not be impersonalized. There will ever be need of those who have skill in caring for the sick—who have the qualities of those general practitioners who have ennobled and endeared the profession. Organization has, as Dr. Collins has said, made medical education more efficient. The next step is to do the same for medical practice.

Medical Book Reviews

Department Director, Royce Paddock, M.D.

MANUAL OF DISEASES OF THE EYE, by Charles H. May, M. D., Twelfth Edition, William Wood & Co., New York City, 1927.

(Reviewed by Dr. Lee W. Hughes, Newark)

The review of the twelfth edition of the manual on Diseases of the Eye, by Charles H. May, M. D., needs no introduction to the medical profession.

The first American edition of this valuable compend found its way into the hands of the physician in 1900, and since then, 11 editions have followed with regularity that only bespeaks the desire of the author to place in the hands of the general practitioner and medical students, a book on ophthalmology that meets all their requirements.

It has never been the thought of the author to recommend this manual in supplanting other books on ophthalmology to those practicing ophthalmology as a specialty, since there has been great omission in detail as well as the discussion of theories on rare conditions, owing to the restriction in size, but all the fundamental facts on ophthalmology have been presented that are essential in this branch of medicine.

There have been a few changes in the twelfth edition; not sufficient to warrant those having previous editions to discard them for this one.

DISEASES OF THE MOUTH, Sterling V. Mead, D.D.S., The C. V. Mosby Company, St. Louis, 1927.

(Reviewed by R. A. Albray, D.D.S., Newark)

The arrangement of the subject matter is logical. The means to be employed in diagnosis and in differentiation, where symptoms may be confusing, are well presented. The therapeutic measures recommended are those generally accepted as the most efficient in the treatment of the disease under consideration. The illustrations are good and in sufficient number to add greatly to the value of the book. Perhaps the plates are rather too highly colored; nevertheless, their value is not impaired by this defect. The reproduction of radiographs deserves special comment upon their general excellence.

This book will give the physician an excellent working knowledge of the local and systemic disorders which may arise as a result of dental disease as well as a comprehensive insight into general dental disorders. The text is not padded. The book is readable. There is an extensive bibliography at the end of each chapter. Altogether one of the best works on the subject.

The Woman's Auxiliary

PROPOSED PROGRAM OF THE COMMITTEE
ON EDUCATION AND PUBLICITY, WOMAN'S
AUXILIARY TO THE AMERICAN
MEDICAL ASSOCIATION

Mrs. George H. Hoxie, Chairman

(From the Journal of the Woman's Auxiliary, to the A. M. A., January, 1928)

Public Hygiene

Fundamentals upon which Auxiliary work for improvement of public hygiene should be based:

(1) Every state, county and city is entitled to a scientific full-time health department (or-

ganized—not to treat the sick, but to prevent disease and promote health), adequately financed, free from political domination, and providing continuity of service to a trained personnel so long as work is efficient.

(2) The first and most fundamental job for lay organizations like the Auxiliary is to secure such scientific full-time health departments and adequate health protection, in their state, their county, their city or town.

(3) Where efficient, full-time, scientific health departments do not exist (and only about 10% of the rural districts of the United States have anything approaching adequate health protection), health activities must be initiated and carried on by volunteer unofficial agencies; but all such work should be so planned and administered as to serve as stepping-stones toward the full-time official health department.

(4) When the full-time official health department, with workers trained for public health work, has become an accomplished fact, lay organizations should support and cooperate with the official workers and should be *willing to take orders from them*.

(5) No health department, state, county or city, can do effective work without intelligent cooperation of the public. Such public cooperation depends upon wide-spread health education. Lay organizations can do this educational work, and are needed for it.

The Auxiliary can be one of the most valuable tools for an official health department to use in this work.

The Auxiliary can also, by its education of the public concerning the official health department's work and needs, be the means of gradually eliminating or preventing political interference with an efficiently working department, and thus insure to it uninterrupted public service.

(6) Most volunteer agencies do not yet realize the wastefulness of their individualistic efforts. One of the first things the Auxiliary should do is to work for this suggested change of attitude in other volunteer women's organizations.

Health officials know that it is not always the work which makes the greatest emotional appeal to the public which most needs to be done. Unfortunately most women do *not* know this. This is something the doctors' wives might well undertake to teach other women.

The National Auxiliary recommends, therefore, that each State Auxiliary undertake, under the direction and with the help of the public health committee of the State Medical Association, a study of the state health machinery and state health conditions, and that through its committees on education and public health it devise means of acquainting all the state board members with the result of the study, and that educational work for the county auxiliaries be based upon the conditions found.

In states where all is well and where time has developed good official health machinery and good health conditions, general knowledge of the fact will tend to prevent interruption of the excellent work, and will be a source of satisfaction to the women of the state.

In those states where there is much yet to be done, this investigation will indicate what sort of work needs doing first. For example:

(a) In those states which are not in the Birth Registration Area, the Auxiliaries would, without doubt, wish to tackle, as their first job, the 90% birth registration problem.

(b) In those states in which the state health

department believes the "County Health Unit" to be the solution of the rural health problem, the county auxiliaries should be encouraged to take as their chief work such persistent and wide-spread education of the public as will gradually create a general demand for the full time county health department.

(c) In those states where the rural health work is directly done "long distance" by the state health department, the county auxiliaries if willing to work, and work under the direction of the state health department, can carry on intensive local health education work which would be impossible for the state department without intelligent local cooperation.

To those auxiliaries which agree with these ideas the committee recommends the following outline of study:

- (1) Vital Statistics. Their value.
 - Compare the vital statistics of the state with those of other states.
 - Compare the vital statistics of the different counties of the state.
 - Compare the vital statistics of the cities with other cities in the state, and in the United States.
- (2) The State Health Department; its organization; and program:
 - (a) For general state work.
 - (b) For cooperating with the counties in improving county health conditions.
- (3) The County Health Unit as a solution of the rural health problem.

Community-Wide Conditions Which Affect Health

- (4) Milk: Standards, why necessary and what milk standards your community needs. How are these needs being met?
- (5) Housing: Your community housing laws. Housing conditions as they have developed under these laws and as they affect health. Improvements needed.
- (6) General Sanitation and its relation to the death and morbidity rates.
 - Sewage disposal.
 - Water.
 - Garbage.
 - Flies.
 - Dust and street cleaning, etc.

Personal Hygiene

The improvement of personal hygiene in any community is almost entirely a matter of education. Here again the Auxiliary members must first educate themselves before they can take a safe part in educating the public. The committee therefore recommends that the Auxiliary study programs shall include:

- Health Promotion:
- Prenatal care.
 - Child Welfare—infant and pre-school hygiene.
 - School hygiene.
 - Mental hygiene.
 - Social hygiene.
- The advantage to the public of general compliance with health regulations.
The periodic health examination.
Control of communicable diseases.

The entire program should close with a survey of all the private agencies doing health work in the community, and a discussion of the possibility and desirability of centering the direction of all such work in a full-time, scientific health department, under which the private agencies, while still maintaining their identity, would work in complete coöperation.

Gloucester County

Mrs. Henry B. Diverty, Chairman

The Gloucester County Medical Society of New Jersey held its annual social session at the Woodbury Country Club, Thursday evening, September 20, at 7:30 o'clock. The Woman's Auxiliary of this Society, of which Mrs. James Hunter is the President, provided the decorations and music under the efficient leadership of Mrs. Duncan Campbell.

County Society Reports

BERGEN COUNTY

Spencer T. Snedecor, M.D., Reporter

The first meeting of fall was held at the Hackensack Hospital, September 11.

The speaker of the evening, Dr. Walter J. Crump of New York, had previously been the guest of honor at a dinner at the Swiss Chalet, attended by 8 of the county physicians. It was so much to expect a record turn-out at this early meeting for so many physicians were still away on vacations, including Dr. Sarla, the treasurer. However between 40 and 50 men were present to hear an excellent paper and renew the county-wide friendships which had dropped off during the summer.

Dr. E. W. Clark, of West Englewood, gave a comprehensive report of the last meeting in the spring but failed to mention that he had a new arrival in his family during the summer months.

Dr. Andrew F. McBride, of Paterson, sent a letter to the Society inviting the members to attend the International Industrial Association convention which was held in Paterson that week. Dr. McBride was complimented on the excellent program.

Dr. Clark also read a letter from Dr. McBride on the question of additional compensation facilities for the physicians of Bergen County. Dr. McBride promised to coöperate in any way possible. The scope of the Industrial Commission is limited by the state budget, but he would take up the matter at the next meeting of his committee to see what could be done toward providing referees for hearings in Bergen County. He did not think it would be possible, as things are now organized to have a medical representative of the committee in Bergen County.

For the Public Relations Committee Dr. Spencer T. Snedecor reported that the committee, appointed by Dr. McCormack, consisted of Drs. Joseph R. Morrow, Harry Wolowitz and himself. A considerable amount of data has been gathered through the summer and the plans and details are being organized for the publicity campaign. The committee hopes to have a definite program to submit to the society at the next meeting.

Dr. Chester King, of Oradell, in behalf of the Welfare Committee brought to the attention of the society the activities of the collection agency which has been working in Bergen County during the past year. This company, called the Knickerbocker Adjustment Corporation, 42nd Street and Broadway, New York, with the sanction of the State Society, came to the physicians of Bergen County soliciting delinquent accounts to be collected on a percentage basis. The representatives showed us their books where they have been successful in Atlantic County and elsewhere.

This company carries full page advertisements in the State Medical Journal. Dr. King states that he has written them several times but had great difficulty to get any reply whatsoever. Inquiry among the other doctors reveals that nearly all of them had handed in delinquent accounts and only one or two have received any financial return, although in many instances, it is known that considerable amounts have been collected.

Under new business there was an active discussion on this subject by many members of the society and it was the consensus of opinion that the doctors had been "played for suckers" on a large scale and that the State Society was partially responsible by practically sponsoring this firm. Not one member was satisfied with the treatment he had received in financial returns. A strong motion was passed that Dr. King be empowered to investigate the situation, inquire what the State Society was doing about it and take whatever steps he could to protect our members such as consulting the counsel of the State Medical Society. It was said that this concern was heavily bonded and could therefore be held responsible for whatever had been collected. Dr. King took the names of all present who had given accounts to this firm and requested any others to send their names to him.

The following applications for membership were read: Dr. Lewis A. Hitzman, of Maywood; Dr. Russell Tether, of Closter, and Dr. M. M. Lynch, of Hackensack.

An application for transfer from Hudson County was presented by Dr. Vincent T. Poole, of Edgewater, along with a letter from the Hudson County Medical Society. It was stated that Dr. Poole had been previously rejected by the Bergen County Society. The Secretary was instructed to find out from Hudson County why they had elected Dr. Poole, who is a resident of Bergen County. His name was referred to the Membership Committee.

Dr. Arthur W. Greenfield, of Hackensack, was elected to membership by transfer.

The Scientific Committee, of which Dr. Herman Trossback, of Bogota, is Chairman, then took charge of the meeting and presented Dr. Walter J. Crump, Medical Director of the Broad Street Hospital, Director of Surgery of Flower Hospital Medical School, a Governor of the American College of Surgeons and for many years a close friend of Dr. Trossback.

Dr. Crump's subject was "The Liver, Gall-Bladder and Biliary Ways." In a broad way he took up the complete subject from the anatomy of the liver to the various pathologic conditions of the common duct.

The liver, the largest of all the glands of the body, has been known since the days of old philosophers as the king of organs and yet not until very recent years have we begun to learn its true physiology. The Eck fistula which short-

circuits the portal vein in to the vena cava has been the great experiment of liver function.

Dr. Mann, of the Mayo Clinic, has found that after extirpating the liver the life of the animal may be prolonged 36 hours by adding glucose and various other ingredients to the blood.

The greatest discovery has been that bilirubin, the pigment causing jaundice, is formed largely outside of the liver; mainly in the red bone marrow. The liver merely maintains a threshold for bilirubin in the blood, keeping a constant concentration. When the bilirubin reaches one part in 50,000, concentration jaundice takes place. Almost as much bile is secreted every day as urine, but nearly all of the bile is reabsorbed before it leaves the intestinal tract.

Dr. Crump spoke of the progress in medical study since a generation ago. New facts then were learned from autopsy findings. Today we gain them from living, experimental pathologic conditions.

The liver has more power to reproduce itself than any other organ in the body. Though nine-tenths of its cells be poisoned with chloroform, the organ regains its healthy function within 9 or 10 days. This great regenerative power of the liver gives us a large margin of safety over the strains of heavy eating, wrong food, fermentation and other insults. It is noted that the liver works on venous blood, filtering out poisons and adding its own nutritious products.

The function of the gall-bladder has been a great puzzle, but of late we have learned that the bile is concentrated therein 10 to 20 times. It is therefore a storehouse on which the liver calls to maintain a constant threshold of bilirubin in the blood.

The cholesterin in the blood is a product of broken down hemoglobin. No longer can we say that infection is necessary to the formation of gall-stones, for well formed concretions have been found in new born infants. An over concentration of cholesterin in the blood will cause gall-stones to form. In pregnancy the cholesterin content of the blood is increased greatly. Coincidentally, we have also observed that women who have been pregnant have gall-stones 4 times as often as those who have not.

In 1908 Charles Mayo dismissed the bugaboo of "innocent gall-stones". Sir Berkeley Moynihan has said that gall-stones are tombstones. Certainly gall-stones are mile stones along the course of life and represent a serious perverted function of the body.

An interesting point was made by Dr. Crump that large stones could be passed by those common ducts which did not go through the head of the pancreas. This occurs in a large percentage of cases.

The paper was discussed by Drs. Erwin, King and Edwards.

GLOUCESTER COUNTY

Henry B. Diverty, M.D., Reporter

The Gloucester County Medical Society held its annual social meeting at the Woodbury Country Club, September 20. The wives of the doctors were present as guests.

Dr. John J. Dailey, of McAdoo, Penna., delivered the main address, talking on "The Country Doctor", a subject which proved interesting and profitable to the members.

Among the other guests were Drs. Emma Richardson, Camden; Ephraim Mulford, Burl-

ington, President of the State Medical Society; Senator Francis B. Davis, and Dr. H. Garrett Miller, of Millville. All gave short, interesting talks.

The meeting was one of the most successful ever held, there being a large number of members present to enjoy the fine program that had been arranged.

Musical numbers by the Wuest Orchestra and vocal selections by Miss Eleanor Pierce and Mrs. Maude K. Justice, with Mrs. Myrtle Carmany as accompanist, were greatly enjoyed.

The Woman's Auxiliary of the society had charge of the decorations and provided the musical talent for the meeting.

An excellent dinner was served by John Proctor, steward of the club.

HUDSON COUNTY

Clinical Society of North Hudson Hospital, Weehawken, N. J.

A. Schulman, M. D., Reporter

The regular monthly meeting of the Clinical Society was held at the hospital, September 11, 1928, with Dr. Louis C. Lange presiding as Chairman. The Hospital report for the month of August, 1928, was read by Dr. Tannert. The report showed a total of 285 cases discharged as cured or improved, and 16 deaths—8 medical, 7 surgical, and 1 still-birth. A complete analysis and discussion were given of two of these deaths:

(1) A carbuncle with rapidly spreading cellulitis of the face and orbit, extension to the cavernous sinus, and general systemic infection.

(2) Supravaginal hysterectomy for a fibroid uterus, in which pelvic abscess occurred as the postoperative complication.

Mr. Karl L. Van Slyke, having just recently assumed his duties as superintendent of the hospital, addressed the staff, complimenting them on their excellent organization and their coöperation with his department. He went into certain details and phases of hospital work whereby the hospital, as a center of medical education, could render even more efficient service to the community.

The following 2 cases were presented from the medical service of Dr. Frank Pearlstein:

Case 1.—R. M., age 26, single, waitress, admitted July 29, 1928, died August 4, 1928; entered with the complaints of dyspnea, pain in the chest, fever and dry cough; diagnosis, pneumonia. Patient had been in a sanitarium for 3 days. Pain was dull, worse in the recumbent position; marked shortness of breath. Temperature 103°-100°.

Personal history: no previous pneumonia, or rheumatic fever; appendectomy 1½ years ago. Family history negative.

Examination showed patient acutely ill, markedly dyspneic, pale; perspiring, nervous; pharynx injected, tonsils slightly enlarged and congested; marked pulsations present in the neck; bulging in the precordial region, apex beat in the 1st, 5th intercostal space, 8.5 cm. from the midsternal line, left margin percussed beyond the nipple line; systolic murmur, harsh, duration all systole, present over all valve areas; P-2 accentuated, louder than A-2. Pericardial friction

rub audible near the base. Lungs: some lagging on right side; flatness posteriorly below seventh rib on right side, and fifth rib on the left side; breath sounds feeble, distant, and of the bronchovesicular type, especially bases. Abdomen negative, likewise extremities.

Laboratory examinations: Blood—RBC 3,240,000, Hgb. 55%, WBC 8200, polys 87%, monos 13%; later WBC 9550, polys 51%, monos 49%. Urine: albumin faint trace, otherwise negative. Blood culture negative. Roentgenograms: lungs—both pulmonary bases hazy; heart—auricular and ventricular curves lost; 4 days later, August 2, 1928, cardiac angles of leather-bottle shape. Postmortem fluid—from the pericardial sac—bloody with fibrin clot; negative for organisms in smear and culture; from the pleural sacs, granulate with some fibrin; smear showed a few lymphocytes, rare polys, and no organisms in smear and culture. Progress notes: July 30, 1928. Posteriorly below left scapula there is marked bronchial breathing along the spine. Vaginal examination discloses no masses, no distention of the culdesac; no marked tenderness. July 31, 1928. Coarse systolic murmur audible over all the valvular areas. Thrills transmitted to neck. Pulse regular and of good quality. August 2, 1928. Flatness posteriorly; dyspnea very marked; pericardial friction rub in right second interspace, suggesting acute pericarditis; definite pulmonic process present in the L. R. L. In view of the physical findings, with absence of cough and facial flush, we are inclined to diagnose pericardial effusion. August 4, 1928. Patient sinking rapidly, has marked dyspnea; pulse not perceptible. August 5, 1928, 1 a. m. Cheyne-Stokes respiration present; at 3:30 heart sounds hardly audible; death at 3:40 a. m. No autopsy. Our reason for reporting the above case is for its differential diagnosis. We believe that the patient had pericardial and pleural effusions and that the pericardial fluid compressing the lungs posteriorly caused the bronchial breathing, which led us to diagnose pneumonia. Postmortem aspiration from the pleura and pericardium showed a serous fluid; one would expect it to be pus if it were postpneumonic, especially since the patient had been ill so long, and one would expect in the early stages of pneumonia only serous fluid. The course of events most probably took the following order: endocarditis, pericarditis, first dry, then with effusion; possibly also myocarditis, and finally extension into the pleura; x-ray record supports the view of pericarditis with effusion.

Case 2. (Dr. Pearlstein.) *Nephrosis with General Anasarca Complicating Pelvic Abscess.*—B. D., age 15, schoolgirl, admitted August 4, 1928, complaining of generalized anasarca, ill-defined abdominal pain, headache, general malaise, and slight dyspnea. These symptoms were noticed 3 days previously, although transient swelling of the ankles and eyelids had been present for several months and severe attacks of sore throat had occurred during the last 2 years. Physical examination revealed moderate anasarca and diffuse abdominal tenderness; teeth poor, some with cavities; pharynx congested; blowing systolic murmur over the mitral area, not transmitted. A diagnosis of nephrosis was made after examination of the urine which showed 36% albumin, and some hyaline and epithelial casts. Blood pressure 110/74; blood chemistry on admission was high normal in every respect, but became more normal before

discharge. A salt-free diet and restriction of fluids was ordered, and patient began to show marked improvement; however, the temperature continued septic, and patient complained alternately of epigastric and pelvic pain. Finally it was deemed advisable to do a vaginal examination and a mass about the size of a grapefruit was diagnosed as probable pelvic abscess, or infected ovarian cyst, or sarcoma of the ovary. August 27, a laparotomy, performed by Dr. Roberts, disclosed a pelvic abscess. Drainage was instituted both through the abdominal wound and through the culdesac; symptoms and signs disappeared and patient was discharged 2 weeks after operation.

In this case we believe that the signs were more indicative of a nephrosis, at the beginning, than of a pelvic abscess; we considered the specific gravity of the urine, 1022, the 20-30% albumin, and the casts, which are the essential features in diagnosing this condition; also, patient's abdominal pain we explained as due to the anasarca; a vaginal examination is not as a routine performed upon a young girl; all the signs, except the temperature, disappeared before the laparotomy was performed.

Case 3. (Presented by Dr. Green, from the Medical Service of Dr. Pearlstein.) *Meningococcus Meningitis.* H. D., white, female, clerk, admitted August 11, 1928, discharged August 29, 1928. Five days before admission patient suffered severe body-aches, especially backache and headache; vomiting followed; the next day chills and fever developed, with shooting pains along the spine. Patient had gone bathing in a public pool 3 days before illness began. Physical examination revealed evidences of generalized rigidity with slight opisthotonos and positive Brudzinsky and Kernig signs. Patient slightly delirious during examination. Pupils equal and regular, though patient stated she had seen double at times; they react very sluggishly to light. Herpes present on the lower lip; patellar reflexes diminished, Babinski and Oppenheim reflexes negative. Chest and abdomen negative. Temperature 103°, pulse 118, respiration 26. Blood count showed a secondary anemia; WBC 30,000, with 90% polys. Urine negative. Spinal fluid: under pressure, turbid, polys 89%, lymphos 11%, cell count 10,000; smear showed Gram-negative diplococci, which were both intracellular and extracellular; culture showed meningococci. Progress: on the first day, 20 c.c. cloudy fluid was removed under pressure, and 15 c.c. meningococcus serum injected intraspinally, followed the next day by a drop of temperature to 100.6°, pulse to 80, and respiration to 20; reflexes unchanged; treatment repeated every day, and spinal fluid examined each time; on the fifth day fluid was clear, polys only 74%, cell count 1100, and no organisms could be demonstrated in the smear or the culture, while the blood count showed WBC 8900, polys 74%. With occasional exacerbations of symptoms and signs, patient steadily improved until on the seventeenth day she had no complaints, and all the previous pathognomonic signs were negative; she was discharged the next day cured, and word has been received tonight, exactly one month after admission, that recovery has been complete.

This case is presented as a typical meningococcus meningitis, diagnosed early, hospitalized at once, and the proper treatment instituted, so that patient recovered fully.

The next 3 cases were presented by Dr. Tannert, from the surgical service of Dr. Lange, while Case 6, also along the same lines of diagnosis, was presented by Dr. Klaus from his own service.

Case 4. *Fracture of Skull with Intracranial Injury*.—R. W., admitted July 25, 1928, discharged August 24, 1928, was brought in by the police in an unconscious condition; vomited several times. A stellate laceration was present in the occipital region; right pupil dilated, ecchymosis of left orbit. Patient drowsy, but could be aroused. The following facial signs were noted: tongue deviates to the right, some drooping of the left eyelid, left side of mouth lags on smiling, difficulty in speech, weakness of muscles of mastication. Unable to raise right arm, paresis of the right wrist; some loss of pain sensation of right palm. Babinski present in right foot.

Treatment instituted consisted of repeated lumbar taps, along with the methods of dehydration, all tending to lessen intracranial pressure. July 26, the first lumbar tap produced a bloody fluid under great pressure. July 30, fluid still under pressure, but not bloody; complaint of headache; Babinski still present on the right; facial paralysis signs very evident, and speech affected. Consultation with Dr. Pearlstein led to opinion that pressure on the left motor cortex was no doubt causing these signs and symptoms. August 11, Dr. Ash reported ocular examination negative. August 13, weakness and paralysis of hand, wrist and arm less, but speech defect and Babinski still present, while on the sixteenth the speech defect was clearing up, but there remained some mental confusion as to how the accident occurred. August 21, power in the right hand increasing; no headache or dizziness; discharged 2 days later, improved, with slight weakness of right hand.

This patient was not operated on, even though the roentgenogram showed a linear fracture of the skull, as there were no focal symptoms, and the case responded to the more conservative methods mentioned.

Case 5-A. *Depressed Fracture of Skull*.—J. D., admitted June 28, 1928, with history of having been struck by a falling piano, so that a wood splinter 3 inches long became firmly lodged in the left parietal region behind the ear; patient did not lose consciousness, and was immediately operated on. Physical examination otherwise negative, except for a laceration of the temporal muscle exposing the skull as the splinter entered. Operated on by Dr. Lange: a piece of wood about about 3 inches long and 1 inch wide, was wedged in the first parietosphenoidal area about 1 inch deep, depressing bone about the size of a quarter, and tearing the dura; no subdural hemorrhage. Scalp and subcutaneous tissues débrided, and splinter removed, followed by cleansing of the site with ether and alcohol; depressed bone dislodged and edges cut away; a small rent in the dura repaired; rubber dam inserted under the cranial bone; the temporal muscle closed with catgut, skin with silk.

Progress: postoperative condition good; no focal or general symptoms; drain removed 2 days later; wound healed by primary union, and patient was discharged as cured in 16 days.

Case 5-B. *Depressed Fracture of Skull*.—H. M., admitted June 28, 1928, with history of having been hit by a stone striking him in the occi-

pital region; he fell unconscious and awakened in the hospital. A marked depression was present in the occipital region in the midline, and there being an obvious depressed fracture, a spinal tap was performed before taking patient to the operating room, 15 c.c. blood-tinged fluid being obtained. Operation June 30, 1928 by Dr. Lange. Findings: a stellate fracture extending anteriorly from the occipital protuberance into the right parietal region, depressed 1 in., about 2 in. in diameter; active bleeding from the transverse and longitudinal sinuses, which was controlled by hot packs; a flap was formed and 4 pieces of depressed bone were removed; a small piece of gauze packing for drainage and possible oozing; closure in the usual way; 1000 c.c. saline given intravenously, as the pulse became poor during the operation; coffee and whiskey by rectum, and a hypodermoclysis, on return to bed.

The following day the dressing was changed; much oozing present, probably spinal fluid; drain removed; general condition good; no focal symptoms. The next day the TPR was practically normal, and patient was comfortable; from this time on convalescence was uneventful, and patient was discharged as cured on the sixteenth day, there being no dizziness, or any cerebral symptoms of any kind; wound was healed and clean.

Case 6. (Presented by Dr. Klaus.) *Fracture of the Skull with Latent Subdural Hemorrhage by Contrecoup*.—W. K., age 21, admitted to hospital April 16, 1928, by the police, in moderately stuporous condition. He appeared drowsy but could easily be aroused to give some details of his injury, namely of being struck over the head with a bottle and falling heavily to the sidewalk. He presented a 3-in. lacerated wound over the right temporoparietal region of the scalp; pupils equal and reacted normally; no bleeding from the ears or nose. The most noticeable symptom during the first week was drowsiness but from this he could easily be aroused; was then quite alert and would answer all questions intelligently and alertly. He did not complain of headache, nor were any focal symptoms noted at any time. Blood pressure ranged around 124/88. Spinal fluid slightly blood-tinged but under no pressure. X-ray examination showed a linear fracture of the right parietal bone. Under release he was discharged as improved on the fourteenth day with the following note entered on his discharge record, which is of interest and importance in view of the subsequent course of events: "No headaches, no dizziness, perfectly clear and alert but reacts somewhat slowly, showing he has not fully recovered from his recent cranial injury. He states that since yesterday he has had a little deafness in the left ear, being on the opposite side to that of the fracture of the skull. He was advised to consult an ear specialist."

This patient was readmitted to the hospital May 2, 1928, four days after his release, with severe headache, dizziness, drowsiness and vomiting spells. Blood pressure 122/92; spinal fluid light yellow, showing blood disintegration, under 14 mm. pressure. Culture showed no organisms. Withdrawal of 30 c.c. fluid gave some relief. Patient showed at this time considerable difficulty in speech, a distinct motor type of aphasia, it being impossible for him to express himself in words although he understood perfectly what was asked him. He recognized and knew various objects but could not name them nor express

himself. A slight right facial palsy was also noted. The aphasia became gradually worse and the facial palsy more pronounced followed shortly by definite weakness of the right arm and leg, particularly noticed in the right hand. A right Oppenheim and Babinski were noted. Temperature during the first 5 days of his readmission fluctuated between 100° and 101°; blood count 14,450; polys 76%. Marked rigidity of the neck became evident. These neurologic symptoms followed in rapid sequence after his second admission, beginning with a slight deafness even before release on first admission. This was in turn followed by signs of general cerebral pressure, as shown by headache, dizziness and vomiting, and finally by local pressure as indicated by progressive aphasia, right facial paralysis and, later, by both right arm and leg weakness. The picture gathered from these symptoms was clearly one of subdural or possibly epidural hemorrhage, from the latent appearance of the pressure symptoms over the left prerolandic area, extending forward over the left frontal lobe, and particularly the left third frontal convolution of Broca. It will be noted that in this case the fracture of the skull and the large lacerated wound presented on admission were over the right parietal region of the skull and that his lesion on the left side must necessarily have occurred by contrecoup, or perhaps may have resulted by direct violence when his head struck the side-walk. Operation was advised and a consultation requested. This threw an entirely new aspect upon the case, which was considered to be a basilar meningitis following fracture of the skull with secondary infection, operation being contra-indicated. This diagnosis was substantiated by the temperature, blood count, rigidity of the neck and the late development of general and local pressure symptoms. Yet the above group of symptoms is not infrequently met with in either subdural or epidural hemorrhages. Still inclining to the belief that surgery was indicated, I had Dr. Lange look at this case and he likewise was of the strong opinion that we were dealing with an old intracranial hemorrhage. A typical Cushing left subtemporal decompression was done May 7, 1928, five days after the second admission. An opening deep in the subtemporal region was made, and an area of bone 2 by 1½ in. was removed. No epidural hemorrhage was found but on opening the dura, which did not pulsate, an old well organized hemorrhage was disclosed covering an area ½ in. in diameter by 1 in. in thickness. The fluid and organized clot, which were light yellow, were removed and a small rubber drain inserted for a few days. Rapid and uneventful convalescence followed the operation. The neurologic symptoms gradually cleared up; the aphasia gradually disappeared, and after 2 weeks patient was able to speak normally. He was discharged May 29, 1928, as apparently perfectly well. Since that time he has had no further symptoms referable to his head injury.

This case is of interest because of: (1) the brain injury being opposite the site of the cranial injury; (2) the rather late appearance of the signs of intracranial bleeding; (3) the differential diagnosis, which was of importance particularly as to surgical intervention.

Case 7. (Presented by Dr. Eckert from the Surgical Service of Dr. Sweeney.) *Traumatic Rupture of the Spleen—Splenectomy.*—J. M., machinist, admitted at 8 a. m., August 4, 1928, for injuries received in a motorcycle accident

in which he was thrown off, hitting his abdomen against his left knee. He complained of sharp pains in left side of abdomen increased by respiration. Examination showed a very rigid, tender abdomen, tenderness more pronounced on left hypochondrium. Patient's facial expression was anxious with pain, some pallor. Urine examination revealed no blood; blood count showed WBC, 14,000; 81% polys and 19% monos. Temperature normal, pulse 96. Within next hour the pulse rose to about 120, skin became ashen, and at 11:30 patient was sent to operating room.

A long median incision was made in abdominal wall and when peritoneum appeared, it was bluish grey. Upon opening this layer, blood welled up into the wound showing active abdominal bleeding. Examination showed no tear of bladder, liver or gall-bladder. On packing off the splenic area and lifting up the spleen this organ was seen to be torn through the lower third, and active hemorrhage ensued. The splenic vessels were clamped and ligated and the spleen removed. The abdominal cavity was cleaned of blood and blood clots; a drainage tube was inserted down to splenic area. Abdomen closed layer for layer. Postoperative recovery was uneventful and patient was discharged August 20, 1928. Blood picture: August 13, 1928; Hgb. 74%, RBC 3,390,000; C. I. 1.1, WBC 13,700; polys 66%, monos 34%; blood platelets 665,000. August 19, 1928; Hgb. 68%, RBC 3,640,000; C. I. 9; WBC 8,000; polys 44%; monos 56%; blood platelets 608,500.

Case 8. (Presented by Dr. Eckert from the Surgical Service of Dr. Sweeney.) *Strangulated Femoral Hernia.*—M. G., age 38, housewife, admitted August 18, 1928, complaining of tenderness and pain over the right groin, vomiting and weakness. History dates back 1 year when patient noticed a small "lump" in the right groin, which became larger when she stood for any length of time and receded when she lay down. This caused no difficulty until morning of admission when she became nauseated and vomited several times. Pain and tenderness appeared over "lump" in groin and on the advice of her physician, she entered the hospital. Examination showed a tumor about the size of a hazelnut, situated about 1½ in. lateral to the symphysis pubis and below Poupart's ligament. Temperature 100°, pulse 84, respiration 24; blood count: WBC 11,800; 64% polys, 36% monos. Urine negative.

Operative procedure: an incision was made parallel to and above Poupart's ligament, and the sac defined. This appeared bluish and very thick. On opening sac, free blood-tinged fluid exuded and darkened omentum and bluish gut were seen; the femoral ring was enlarged and the sac contents returned to the abdomen. The sac was then ligated and sutured up to the ligament, the fascia sutured to Poupart's ligament, and the wound closed.

Patient vomited once postoperatively but complained of very little pain in the operative region; had no distention of any kind and made an uneventful recovery.

Case 9. (Presented by Dr. Eckert from the Surgical Service of Dr. Sweeney.) *Acute Suppurative Gangrenous Cholecystitis.*—A. B., age 48, Italian housewife, admitted August 13, 1928, complaining of nausea and vomiting, pains over abdomen. Four days before she had experienced sharp pains in the abdomen; later felt nauseated and vomited. These symptoms continued and

she was advised to enter hospital where a provisional diagnosis of ruptured appendicitis or gall-bladder was made, and operation decided upon immediately. Blood count: 87% Hgb.; RBC 4,360,000; WBC 27,000; 93% polys, 7% monos. Temperature on admission 103.4°; pulse 120, respiration 24.

On opening the abdomen free purulent fluid was found; appendix somewhat congested but riding free. This was ligated and removed. Gall-bladder distended and bound down with adhesions. A small perforation in the gall-bladder in the bed of adhesions exuded pus. The gall-bladder was opened and curetted. A large tube was inserted into the gall-bladder; 3 large cigaret drains were placed in the abdominal fossae on right side, and abdomen was closed.

The patient was in a condition of shock for at least 36 hours after operation but after an intravenous of 10% glucose solution and 2 hypodermoclyses of saline, with stimulating medication, her condition became better and although there was a profuse purulent and bile-stained discharge from the wound for two and a half weeks, she made an uneventful recovery.

Case 10. (Presented by Dr. Eckert from the Surgical Service of Dr. Sweeney.) *Gangrenous Appendicitis with Abscess.*—A. L., age 8 years, admitted to hospital August 17, 1928, complaining of abdominal pain, vomiting and a frequent desire to urinate. History showed a previous admission to hospital as a private patient August 10, 1928, with complaint of similar symptoms, examination having revealed tenderness over McBurney's point, white count of 12,100, 83% polys and 17% monos; urine negative. At this time patient was in hospital until August 13, and was discharged as improved. On return home symptoms recurred and she was advised to return to hospital for operation. Examination on re-admission showed rigidity of rectus on right side and tenderness over McBurney's point. Temperature 104°, pulse 120, respiration 40.

When the abdomen was opened a hard matted mass was seen and felt in appendiceal area. This was packed off carefully and upon separating omentum from the mass, a thick yellowish pus with fecal odor oozed out into the wound. This was cleaned and the appendix defined. This appeared thickened and red and perforated. On account of its friability, it was removed piecemeal. The abscess was seen to extend down to right tube, ovary, uterus, and bladder, probably causing the frequent desire to micturate. Two cigaret drains were inserted to insure good drainage and abdomen closed layer for layer. Patient's condition was good postoperatively; after 3 days the drainage from wound assumed strongly fecal odor. The wound was irrigated with 1:5000 potassium permanganate solution and patient's temperature gradually receded to normal. Discharged September 9, 1928, cured.

PASSAIC COUNTY

John H. Carlisle, M. D., Secretary

A regular meeting of the Passaic County Medical Society was held September 13, 1928, at the Paterson Health Center. About 40 members were present when the President, Dr. E. Tuers, called the meeting to order. The scientific program consisted of a three-reel film published by the American College of Surgeons and

the Eastman Company. It represented the diagnosis and treatment of infections of the hand. A general discussion of hand infections followed.

Most of the regular business of the meeting was postponed. Applications for membership were received from the following physicians: Albert G. Markel, 320 Broadway, Paterson; David Polowe, 555 East Twenty-seventh Street, Paterson; Harry Wolfson, 330 Broadway, Paterson; Anthony E. Cortese, 119 Jasper Street, Paterson, and William W. Sutherland, 295 Broadway, Paterson. These were referred to the Board of Censors.

Dr. H. L. Wenger, of 576 Broadway, Paterson, applied for membership by transfer from Queens County, New York.

After a discussion of the State Medical Practice Insurance Policy the meeting adjourned at 11 p. m.

UNION COUNTY

Summit Medical Society

William J. Lamson, M.D., Reporter

The Annual Dinner of the Summit Medical Society was held at Wallace Pines, Tuesday, September 6, 1928, at 7.30 p. m.

Present were Drs. Bensley, Bowles, Byington, Campbell, Disbrow, Hallock, Johnston, Keeney, Krauss, Lamson, Larrabee, Lawrence, Macpherson, Meeker, Meigh, Morris, Pollard, Prout, Reiter, Tator, Tidbeck, and Wolfe, and Dr. Mary Thomas, of Summit, as guest.

The President, Dr. Krauss, the Vice-President, Dr. Meigh, and the Guest of Honor, Rev. E. A. McAlpin, of Madison, were seated at the head table.

After a sumptuous repast, in which hors-d'oeuvres, lobster thermidor and plump squabs figured largely, Dr. Krauss delivered a presidential address, in which he recalled some of the aims and traditions of the society, which was founded April 13, 1905, and emphasized the value of scientific contributions by the members themselves instead of depending on some outside physician to read a paper at the monthly meetings. He urged more regular attendance by the older members, so that the benefit of their larger experience might be shared by the younger men who are to carry on the standards of the society.

Dr. Krauss then introduced the guest of the evening, Rev. Dr. E. A. McAlpin, of Madison, who gave an interesting talk on the value of religion in the treatment of the sick. There are many cases in which the right sort of a minister, or priest, or rabbi can cooperate with the physician to the great benefit of the patient, and he urged that medical men recognize this as a therapeutic measure of great value, and that they avail themselves of its aid.

Dr. McAlpin's remarks were discussed by Drs. Lawrence, Prout, Bowles and Campbell.

The Secretary was directed to write to Dr. Dengler and convey to him the deep sympathy of the members of the society in the loss of his father.

The dinner marked a distinct advance, gastronomically, socially and scientifically in the annals of the Society.

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PHYSICAL MEASURES AS AN ADJUNCT TO SURGERY

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The last 10 years have brought physical measures before the professional eye in a rather startling manner. By this I mean that the struggle of more than 30 years for recognition has come to rapid fruition during this brief time. The pioneers who had demonstrated to their own satisfaction the practical clinical value of electric energy and other physical forces met with so much opposition from the general profession that there seemed to be no outlook for the future that physical measures would ever be regarded as agents of worth.

Surgery has long withstood the assaults of physical therapists and it is only since the late war that there has been any real evidence that recognition would be accorded these agencies for human betterment. Now we find hospitals all over the country and abroad outfitted with apparatus in considerable amounts, some, naturally, better equipped than others but all tending toward a full recognition of the value of these measures. The government, early recognizing the need, set up special institutions for the war victims and, following this lead, other institutions and hospitals have added such departments, so that it would now be fair to state that any institu-

tion for care of the sick and injured that does not so equip itself must be considered to be a "back number".

Returns from a recent questionnaire sent out by the A. M. A. show that the orthopedic surgeons are in the lead as to numbers who have physical therapeutic departments in their institutions; 66% of the responses being from such specialists. Industrial hospitals are next with about 50%. Both are now considered to be good showings, yet when one looks into this carefully he will see that a considerable amount of missionary work still remains to be done. It would naturally be thought that the industrial surgeon would see the value of physical measures, particularly when he realizes their assistance in shortening time lost, which alone is a great economic factor. That only 50% are thus advanced is a great surprise, for it would be expected to find nearer 100%. The surprise to the writer is that the orthopedic surgeon has the larger vision but, this being the case, it offers the thought that other surgeons will soon fall in line to make the 100% sure.

The general surgeon is also learning something of the value of physical forces in assisting his efforts both before and after his part is accomplished. Dr. Crile recently gave out his experience with diathermy as an agency for prevention of shock from operations. It has long been known that heat was an important factor, but it seems that Dr. Crile, in using diathermy, particularly of the liver and the whole abdomen, has shown that this form of internal heat has value far greater than has been known, and no doubt in the

future this form of therapy will be a standard one for all major operations.

There is another suggestion along similar lines; i. e., that diathermy of the chest prior to operations may prevent postoperative pneumonia. This is a suggestion that might be well worth trying out, realizing that it could do no damage even though it could not be proved to have prevented such a complication. Improved circulation must certainly have good value in improving metabolism, which is on the right side of the ledger.

A proper consideration of this great subject would necessarily result in writing a volume; therefore, a paper for such an occasion as this must condense the subject, and this means that some points must receive scant attention while some others will not even be mentioned.

First, we will consider sprains, strains and contusions, all of which may be considered surgical even though they are often treated by the physician; properly they belong to the orthopedist.

Granting that there has been a proper x-ray examination and no fracture found, if the case is seen quite early by the initiated 2 or 3 proper treatments will usually suffice. We have, taking a sprained ankle as an example, the usual feature of such trauma—swelling, redness and pain as cardinal signs. We all realize that with any inflammation there is always an exudate thrown out as a matter of splinting, that nature offers for her contribution toward a cure. At first this is serous in character but it soon becomes more and more dense until it constitutes a fixed material binding down firmly all structures that have been involved.

The usual treatment, followed by the average physician, has been the use of hot and cold water, with strapping, and a loss of 1 to 3 weeks of valuable time. If such a patient applies to a surgeon equipped with knowledge and apparatus, the latter will at once get busy with his electric forces. If the accident has just occurred, 2 or 3 treatments by use of the static wave current applied over the injured part will suffice, and no strapping will be required. If, however, the condition is 1 or 2 days old it will be a different mat-

ter; the exudate has had a chance to become firm and, therefore, a number of such treatments will be necessary and it may be that strapping will be required during the interim between treatments. In many of these later cases a good result will be hastened by the added use of diathermy, since a good heating will increase the value of the static current. What is said of the ankle sprain will apply to any other part of the body, with proper modifications of course. For instance, the sacro-iliac strain, which is the common industrial type, may receive the same form of treatment but, the muscles and ligaments involved being so much heavier and the joint also larger and firmer normally, we must use larger amounts of electric current and longer séances to secure the best results. In this type of injury we find muscle spasm to be one of the large factors preventing reduction when there is an actual displacement; heat and the mechanical static wave current properly applied will soon reduce that to a minimum and then other necessary measures may be used. While the heat current is always a measure of value and comfort it is not absolutely necessary, for the static wave current has demonstrated its usefulness in taking care of this feature. The static machine is not always available, and the diathermic treatment will be valuable alone.

Since it is necessary to mention the static wave current throughout this paper, and since there may be some members who are not conversant with it, a brief explanation may be of service. This is a purely mechanical current having no appreciable heat effects; neither has it electrolytic value. The sensation felt by the patient is one of contraction and relaxation, particularly of the area under treatment. In giving it, the patient sits upon an insulated platform and a metal electrode is applied to the part to be treated, with a wire connected to the positive pole. The negative side of the machine is grounded by a chain connected with the water pipe or heating system. The current is unipolar, as you see, by this arrangement, the circuit being completed through the air and earth. With the 2 polar pieces placed together, the machine is started

and as these poles are slowly separated a spark jumps across. As this occurs there is a synchronous contraction of the part just under the electrode, and each contraction is quickly followed by a corresponding relaxation, so that we have repeated contractions and relaxations of the injured tissues, the effect of which is a squeezing out of the infiltrate that has accumulated in the tissues. In the recent case, with swelling, one can almost see the reduction while the treatment is going on. Surely the result is almost startling when compared with any other method. This current being given from the positive end of the machine offers the added benefit of sedation for the pain, a characteristic of positive electricity. Cell massage is another effect of this treatment, thereby offering metabolic value; so, you will see in the static wave current effects that are not had by use of any other type of current or physical force except in a modified way.

Diathermy is now quite well known to most practitioners and will need but a word or two. The high frequency current thrown through the tissues causes heat to occur within the tissues treated, since this is the natural result of the tissue resistance. The electrodes should be of substantial metal and of even size, applied generally in apposition, though at times this is impossible, in which case the cuff or other method can be used.

Lacerated wounds, and for convenience all open wounds may be so considered, offer special opportunities for the use of physical measures. During and since the war, many if not all the hospitals have used some form of radiant energy among their treatment measures, and the value of light is increasingly proved. Literature has been literally teeming with it, so this part will not be new. Wounds heal more promptly and without scars under light, and thus the economic side comes to the front again. There are 2 ways of using light energy and several types from which to make choice. One way, not very widely used now, is that of a low candle power lamp applied over the wound for long periods of time with the wound undressed; there may be some protective fine-meshed

wire screen as a guard against insects, and in some cases there may be the application of this lamp under the bed clothes with a supporting frame to insure an air space, and there will be no danger of burns because the heat will remain moderate. The usual and generally better way of application is use of the modern parabolic hooded lamp of high wattage, which is played over the wound for a half hour or longer and then to dress the part in the usual way. These applications may be used twice daily, if the surgeon so chooses, to insure an active hyperemia. We have now for this purpose the tungsten lamp, 1000 to 1500 watts, in a parabolic hood which insures the rays being thrown in parallel lines, an improvement over the old hoods that allowed rays to be thrown only in a focus, and with the consequent danger of producing burns. Then again we have the modern infra-red lamp which replaces the carbon filament bulb so hard to get now since they are no longer being made. In addition, we have the various makes of arc lamp which offer some value from the full spectral rays with the ultra-violet in addition, the amount of the latter being largely a matter of choice since the various types of carbons give just what you want and need.

In closed wounds, diathermy will have great value from the hyperemic standpoint. One must be careful, however, in applying this where there has been a nerve injury which may have produced some anesthesia. If this is overlooked there may result a serious burn, because the patient will not feel the excess current. When the wound is still open and diathermy is used, metal electrodes cut to cover each side of the wound and attached by a bifurcated wire to one side of the apparatus while the other electrode is in apposition, may be employed and the usual current dosage may be given; the same care being observed.

Fractures offer a field of usefulness that has not been properly investigated by the surgeon. While surgeons have advocated the use of electric energy for the treatment of post-splinting conditions, there has been little thought given to the fact that there may be

some value in assisting nature to heal the fracture and in prevention of ankylosis and other sequels. Theoretically, there should be great value in diathermy for expediting this process of fracture healing; in fact, it has been said that almost one-half of the usual time could be saved by such applications. The average surgeon has not been "sold" to this proposition; therefore, he does not give the electrotherapist opportunities for such test work, and, as a rule, we see few such cases during the early stage of healing. The time we usually see such cases is after the splinting period and only then in case there is some condition that requires special attention, after massage and other measures have failed.

Some years ago, I suggested that all ambulant fractures could receive to advantage the static wave current early during the healing process, with the thought that such treatment would keep the inflammatory exudate free and the circulation active, thereby assisting nature in her healing efforts. So far as I know, there has been little or no response to this suggestion, perhaps because it may sound lacking in practicability. It should be entirely practicable in case there is a static machine available with an operator who understands it and the various methods of using it. Such treatments could be given after the first week safely, taking off and replacing the splints as required. Diathermy, either preceding or following it, would make a good working team for best results. By such treatment much disability could be prevented, particularly in arm fractures.

Ankyloses, contractures and the ordinary muscular stiffness as the result of oversplinting or some unavoidable cause, come naturally within the scope of physical measures, and these cases are practically the only ones connected with fractures that the electrotherapist ordinarily sees. Such conditions can be successfully treated by either one or all of the various modalities—diathermy, static wave, brush discharge, vibration, and radiant energy properly applied—such applications being given according to the individual needs and not empirically.

Delayed union and ununited fractures may

be benefited by diathermy but there is an element of doubt in its value in the latter condition. Since some report favorable results, it is always well worth a try out. In some such cases small dosage kept up over a considerable length of time, followed by séances of ultraviolet light, will bring better response than will the larger dosage with shorter length of time. This will be a matter of experience. The ultraviolet should be given over the body for systemic effects, since it appears to activate and fix the calcium, phosphorus and iron content of the blood.

Paralyses following injuries may receive benefit from electric currents, granting that the surgeon uses first the same care that he usually does, such as suturing the nerve when practicable and other necessary requirements. Diathermy will probably be the first measure of choice so that the hyperemic activities may have a good chance to work. Following this it is usual to apply some form of galvanism, either the plain in the stabile or labile way, or what is usually better, by the sinusoidal method. In postoperative paralyses such as the facial from mastoid operation, which is at times apparently unavoidable, there will usually be some difficulty in getting prompt results; these cases respond very slowly if at all. When galvanism is indicated it is usually best given by the sinusoidal method, as this offers most stimulation to the nerve cells and the muscles involved. One good reason why these cases respond so slowly is that the operation is done at a late hour following a long standing infective process where there has been some nerve degeneration. In cases where the nerve is cut, the response to electric stimulation is often slow. Could such nerves be sutured the result might be better. Collateral nerve activity is necessarily slow at best and meanwhile the muscles have gone through some atrophic changes which make for slow progress. In using the galvanic current, one thing must be borne in mind. Never use a current that is too strong. It is always wise to test the well side and use just enough current to mildly activate the healthy muscles. By this method one avoids overstimulation, which would do harm rather than good. Short

séances at first, and gradually increase both dosage and time as judgment indicates the need.

Surgical septic wounds received during operations or autopsies offer another field of usefulness that has not been recognized by the surgeon who always stands in the position of being a potential victim. There have been so many amputations, and even deaths, that this fact of possible benefit and saving of life should make this a matter of the greatest interest to the surgeon. For a number of years it has been demonstrated by the electrotherapist that dry heat will usually take care of such septic conditions. The hand, arm or other part involved should be wrapped in a heavy turkish towel and placed in one of the well known baking ovens that formerly had so much vogue in the treatment of arthritis. The heat should be run up to 400° F. and the part should be kept in the oven long enough to get up a most active hyperemia. The rapid flux of blood coming into the part at the normal blood heat in a steady stream does not allow of a temperature that will do harm. The active hyperemia brings about increased phagocytosis and all the usual benefits of nature's healing powers. The towelling takes care of excess moisture, so there will be no burn. These treatments may be kept up as required, since there can be no harm done when used judicially. Naturally, the earlier the treatment the better the result.

Chronic abdominal conditions that may eventually require operation if nothing is done in the line of prevention may some times be saved from operation if properly treated by some form of electric energy. Whether or not the surgeon will consider this a benefit to him, the writer will leave, but as a justifiable measure when life is not endangered thereby, it would seem wise at least to give such a testing treatment to see how much of a favorable response will be the result. When operation is inevitable, such measures should be used in preparation for the operation; for instance, the use of abdominal diathermy for prevention of shock, as used by Crile and others. In what we have been accustomed in the past to call chronic appendicitis and the

average case of chronic cholecystitis, diathermy will not only give relief from pain but will often induce curative action from its hyperemic qualities; this has been demonstrated in numerous cases. In cholelithiasis or kidney stone, much palliative value can be attached to diathermy, and, while it cannot possibly take the place of the knife in such cases, much pain can be saved the patient by its use and metabolic functions will be improved, which in turn will be helpful toward a rapid recovery after operation.

Convalescence after operations may be shortened by all measures that activate metabolic forces; therefore, whenever practicable, such cases should receive some or all of the various forms of electric energy that are proved by experience to do just that. Of these we have the radiant forms of energy such as light and heat, ultraviolet and arc light, for such purposes. When these are applied, the skin must be bare and both the chest and abdomen, front and back, should receive the treatment. The start with the ultraviolet should be by 1 or 2 minute exposures, gradually increasing as the skin tolerance is established. Experience will be the best regulator of this, and such experience can be readily gained if one will use judgment and has a sufficient number of cases to treat. Other measures, such as diathermy, static wave current, or the galvanic, plain or sinusoidalized, will have value during the convalescent period and should be used as indicated.

Burns offer a fairly new field of usefulness which may not be generally known. Hospital records show that the use of light early in all degrees of burn will bring about quicker results in healing, and the cosmetic effects will be far better than by any other method of treatment. Personally, I have had no experience in this direction, my statement being made entirely by reason of case reports of others and the experience of some in whom I have entire confidence.

Prevention of postoperative adhesions has been credited to the free use of diathermy both prior to and subsequent to laparotomies, and is worth a thorough try out by abdominal surgeons.

Since we frequently find weak musculature following appendectomies and other abdominal operations, it will be well to bear in mind the potential benefit that may be received from use of the Morse wave or other form of sinusoidal current. This given after diathermy makes for a good working team, and the results may be surprising. Of course, the Morse wave current should not be used until healing is established.

It would seem that this subject is an almost interminable one and much more could be said along similar lines, but since the paper is already long, these several points will be omitted for the sake of brevity with the hope that some may be brought out in the discussion that generally follows.

PHYSICAL THERAPY AIDS IN FRACTURE AND ORTHOPEDIC CASES

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Physical therapy has thoroughly demonstrated its position as an indispensable adjunct in both surgical and medical practice. It is an important form of therapy today in almost every surgical specialty and has a wide field of application in the general practice of medicine, from simple ailments that may be treated in the office or at home to the more complicated diseases that require hospital care.

This department of therapy has had the enthusiastic support of the orthopedists for a number of years but it received its greatest recognition during the period of the World War and the reconstruction work following. The destructive forces of the war which seriously impaired the defensive strength of the European nations, and the increasing number of injured and maimed in our country, presented an economic problem that had to be solved. The world looked to the medical profession for the remedies that would preserve its man-power and the call was promptly an-

swered. A great military medical organization became a reality, served its specific purpose, and again passed out of existence, leaving after it many notable achievements, of which the organization of a physiotherapy department is a conspicuous example. Its field of application has continued to expand with remarkable rapidity and the benefits of this form of therapy have been amply demonstrated. A recent report of the Committee of Education and Hospital Service of the American Medical Association published in the May issue, Volume 90, Number 12 of the Journal, cites the growth of this department. The report shows that of 4322 general hospitals, 1506, or 34%, have physiotherapy departments; of 563 neurologic hospitals, 233 or 41%; of 168 industrial hospitals, 80, or 47%; of 62 orthopedic hospitals, 42, or 67%.

This report clearly shows the rapid growth of this department in our hospital organizations and it also emphasizes the fact that the greatest percentage of expansion has occurred in orthopedic institutions. In discussing physical therapy aids in fracture and orthopedic cases I must confess that it is quite impossible to enumerate all of the disabilities and deformities that are amenable to physiotherapeutic treatment and I am not going to burden you in this respect. But it would be proper to select a few cases of common occurrence that are relieved by physiotherapeutic measures and to offer them for your consideration, with the hope that they will illustrate the fundamental principles of physiotherapy as applied to orthopedic practice.

THE ACUTELY PAINFUL SHOULDER

This lesion deserves special mention because of its relative frequency and also its severity, which at times amounts to a total disability. It differs from an acute synovitis in being essentially a myositis, although x-ray examinations frequently show the presence of localized bursitis of a chronic nature either of the subdeltoid or subcoracoid bursa. The onset is usually acute with pain severe enough to require sedatives for relief. The facial expression and the position of the arm, which is fixed at the scapulo-humeral joint, express

fear of the slightest movement. There is rarely a history of direct trauma. On the contrary, the patient may give a definite history of exposure, and upon further examination the existing bursitis may be disclosed. At first all the muscles of the shoulder girdle are involved. Later, however, the pain and tenderness become localized about the bursa and the long head of the biceps muscle, suggesting a tenosynovitis. The acute symptoms may last from 7 to 10 days, with stiffness and atrophy remaining for an indefinite period. Physiotherapy plays a prominent part in the treatment of this condition and considerable relief may be expected from its use.

The orthopedist lays great stress upon the position of the arm during the progress of treatment, as it has been found that an abduction of about 90° from the body axis will produce muscular relaxation and remove pressure of the deltoid muscle upon the bursa. At first, some difficulty may be experienced in obtaining this position but as soon as it can be accomplished the patient finds marked relief. This position having been obtained, emphasis is then placed upon physiotherapy to bring about a normal resolution.

Heat applied to the muscles about the shoulder is often very welcome and has a sedative effect. Hot fomentations may be used at first, or the infra-red rays may be used if dry heat is desirable, but the patient will receive more lasting benefits from the application of diathermy as early as possible. Conversive heat is administered with greater accuracy of dosage and may be applied without changing the position of the arm. The electrode is applied to the anterior and posterior surfaces of the shoulder about the head of the humerus, and the high frequency current directed through the soft tissues to produce a gradual relaxation of muscle spasm. The treatment may be administered daily or on alternate days as the case warrants, and the dosage may be governed by the individual factors. Following each diathermy treatment it is highly desirable to secure absolute rest for a period of 1 or 2 hours to prolong the sedative effect of heat. Active hyperemia superimposed upon an acute congestion may,

in some instances, add to the acute pain; but diathermy, followed immediately with a modality having a decongesting action may be used with considerable benefit and without causing pain. The static effluve from the DeKraft resonator is useful in the acute stages; resorting later to the static Morton wave or static spark. The multastat, an improvement of recent date, will permit the use of diathermy and faradic surging current at the same time and with only one set of electrodes.

Surpassed only by heat is the benefit derived from massage, and when skillfully administered by a trained masseuse we find it is a welcome form of relief. Gentle stroking movements applied to an inflamed muscle have a soothing effect and patients frequently state that they receive more relief from massage than from any other form of treatment. When the pain subsides and the disability in the shoulder is largely one of muscle stiffness and atrophy, sedative treatment is to be supplemented with stimulative remedies such as corrective exercises, static Morton wave, galvanic sinusoidal, and surging faradic stimulation, each of which produces rhythmic contraction of the muscle which materially promotes functional recovery. With increase of muscle movement will come a change in posture without the dependent arm being permitted to stretch the soft structures about the shoulder joint.

ACUTE FOOT STRAIN

This strain occurs at all ages and in both sexes, but is slightly more frequent in females because of the styles of shoes worn and their tendency to produce structural foot defects. I believe that this subject warrants special mention as it may be largely relieved by application of physiotherapy. It is a striking fact that a large number of patients are treated by chiropodists, podiatrists, or other unqualified practitioners, believing that medical practitioners are not interested in these minor foot ailments. Time will not permit and it is not my intention to dwell upon the analysis of this observation, but it is an important fact worthy of serious considera-

tion, that far too many patients are needlessly suffering from acute foot strain and too few are receiving assistance from qualified doctors of medicine.

Foot strain is not always due to direct injury. On the contrary, it is most frequently a slowly developing disability of the soft structures superimposed upon a preëxisting defect in the bony structure. Alteration in structure produces an alteration in function, and with continued use of the foot under these conditions there gradually develops an acutely disabling and painful condition which we refer to as foot strain. As the preëxisting causes may be easily detected and prophylactic measures instituted, such strains are preventable. Having developed, however, the condition is curable. I know of no other acute condition in orthopedic surgery that offers the physician the opportunity of giving relief in so dramatic a manner. Fortified with a knowledge of anatomy, the physiologic reaction of muscle tissue and the mechanical principles of the normal foot, there should be little difficulty in providing relief; it requires only the observance of a few orthopedic principles and subsequent application of physical therapy. We are dealing with an acute muscular fatigue, usually incapable of spontaneous resolution yet amenable to simple remedies before permanent structural changes in the muscle occur. Infrequently, the patient is compelled to undergo complete rest, but in most instances it is practicable to treat such cases as ambulatory. Acute muscle fatigue demands rest as the first consideration, and by rest I mean, not only the avoidance of motion in the structures of the foot, but particularly avoiding weight-bearing which is so often an aggravating element and which, if continued upon inflamed structures will aggravate and prolong the disability.

Following rest, it is necessary to reëstablish arterial, venous, and lymphatic circulation in the involved muscles. They must be emptied of the waste products of muscle activity, which, having accumulated to an excess, greatly impair normal functions. Fresh arterial blood must penetrate the muscle fibers and reëstablish cellular metabolism. Dia-

thermy produces an arterial hyperemia and will accomplish the desired result. Because of the inaccessibility of the small muscles of the foot and the difficulty of applying electrodes, use of the water bath electrode is recommended; it seems to facilitate treatment and, when necessary, will permit the coincident treatment of both feet.

Massage is applied immediately following the application of heat, especially to the muscles of the calf, the smaller structures of the plantar surface of the foot, and about the heads of the metatarsal bones. Daily sedative massage with gentle stroking movements is first administered for 10 to 15 minutes at a sitting. Later, the stiffness and muscle contraction are relieved by deep massage of a more stimulative character and, when all evidence of acute muscle fatigue has disappeared, muscle exercises are started. Before muscle exercises are indicated it may be necessary to overcome adaptive shortening of the opposing muscle groups; a condition which usually occurs in the long extensors of the toes and is relieved by stretching and manipulation. In the interval between treatments the inflamed structures of the foot must be protected by a support of the semi-rigid or rigid type.

When bony re-alignment is possible without manipulation the semi-rigid type may be used, but in some cases the tarsal and metatarsal joints may offer firm resistance to replacement of bony structures; in which case it may be necessary to break up adhesions under anesthesia and later to apply a metal arch to mold the foot in normal alignment. Mechanical stimulation, such as the static Morton wave, faradic surge, galvanic sinusoidal or Morse wave generator, is applied during convalescence and should be used after all evidence of fatigue has disappeared. During this period the sole object is to restore normal muscle power and prevent the bones from again becoming displaced.

Finally, details of the shape, style and construction of the shoe are of sufficient importance to command attention of the surgeon instead of leaving this matter entirely to the shoe salesman. It is essential that the foot shall have sufficient room within the shoe to

function properly, and when the surgeon employs corrective shoes with lifts and wedges the duty rests with him to make sure that distribution of the weight falls upon the proper foot structures.

PERIPHERAL NERVE INJURY

Here is another important problem that offers excellent opportunity for the application of physical therapy. The nerves most frequently involved are the musculospiral, posterior interosseus and the ulnar. For the most part, nerve injuries are due to direct trauma with resulting paralysis. In such injuries physical therapy is indispensable in determining the character of injury and in preventing muscle atrophy during the stage of paralysis. In treating peripheral nerve injuries it is, of course, necessary that the physiotherapist be instructed in the principles of orthopedic splints, their removal and re-application. It is further necessary to maintain the position of physiologic rest and at no time to permit stretching of the paralyzed muscle. It seems to be a prevalent opinion that treatments cannot be administered to patients who are wearing splints or appliances to the extremities, but I think it is scarcely necessary to inform you that this belief is false and that it deprives patients of the early application of physical therapy at a time when the treatments are of greatest importance. Heat should be employed as soon after injury as is possible, to prevent rapid muscular degeneration and the replacement of muscle structure by fibrous connective tissue. Conversive heat is the method of choice, as the arterial hyperemia produced by diathermy will minimize the degree of muscular degeneration. Massage, which is next in importance to diathermy in the treatment of nerve injuries, should be assigned to expert technicians whenever possible. Paralyzed muscles require very delicate treatment, and there is little doubt that the mode of application may influence the ultimate result. Only sedative massage is used over the muscle belly and effort is largely confined to restoring circulation.

Galvanism may be applied over the motor point of the muscles to prevent atrophy.

Here, too, we must be careful to avoid fatigue and the daily series of exercises produced by galvanic stimulation must be confined within definite limits which are known to be short of fatigue production. Galvanism is also of diagnostic assistance, to determine the degeneration to reaction and to establish indications for operative intervention. As soon as regeneration is apparent, as evidenced by increase of muscle tone, muscle twitching and slight voluntary contraction, it becomes advisable to substitute faradism over the course of the injured nerve sheath. This may be continued until active muscle movements appear and may even supplement graduated exercises. Again, at the time of operation, application of the faradic current is of importance in determining the topography of the axon within the nerve sheath. Hydrotherapy aids in maintaining the circulation of the extremity, using either the contrast or the whirlpool baths. Warm salt baths, combined with massage, may be used to establish early voluntary motion while the muscles are still in a feeble state of regeneration. After voluntary motion is established, the remaining treatments for the nerve are largely of a stimulative character with emphasis placed upon muscle exercises.

While on the subject of peripheral nerve injuries we might mention *infantile paralysis* which, as you know, is of great import to the orthopedist. Physiotherapy is of importance in this condition, but it is equally important to remember that there are limitations to be observed, and that the benefits derivable from it have not been satisfactorily established. In the acute stages it is not indicated; attention is given rather to position of the limb and to general medical care. During convalescence, when pain has left the muscles, we may employ very gentle sedative massage and heat, exercising care to maintain proper position of the part. Galvanism and faradism do not offer the hope of early regeneration that might be expected and experience has shown that they may often be harmful when injudiciously employed. Vasotrophic disturbances are not relieved by such measures and care should be exercised that ulcerations do not

occur in the skin. When the stage of deformity has developed and the patient is permitted to get about, he should be furnished with a mechanical support to maintain the normal structural alignment, and at this point attention may be given to voluntary exercise, preferably supervised by both the surgeon and the physiotherapist. There are many forms of exercise to encourage voluntary movement in the trunk and extremities, such as the "crawl" exercises described by Clayton, which are particularly beneficial for children, and, recently, emphasis has been placed upon the value of swimming exercises. When the equipment is available these forms of exercise are desirable and considerable improvement is to be expected, especially in children, as they have not only therapeutic value but a psychologic effect in encouraging more active movement.

It is not my intention to discuss the value of ultraviolet light at this time, as that will be amply covered in the paper by Dr. Brooke, but one observation is worthy of note in reference to acute rickets. In the past, the orthopedist has largely emphasized the necessity of maintaining structural alignment by the use of braces in addition to general medical care. The introduction of ultraviolet light has changed our views concerning the treatment of acute rickets, and experience has shown that the ultraviolet light and a cod-liver oil diet materially shorten the period of disability through restoring normal bone metabolism.

ARTICULAR SPRAINS

When a joint is forcibly moved beyond its normal limits the soft structures that control the articular ends of the bone undergo stretching or rupture varying with the force applied. This condition constitutes an articular sprain. Some joints are more prone to injury than others and certain hazards are developed both in industry and in sport which, owing to frequency of occurrence, cause injuries that are dignified with special names such as tennis elbow, riders' strain and football knee.

For the most part sprains are not re-

garded as serious and it is my impression that the majority of them are treated as ambulatory cases; at least after the first few days of initial reaction. This practice disregards the aggravating element of weight bearing which is worthy of more consideration. The center of gravity of the leg does not correspond to the axis of the long bones, therefore the stress of weight bearing is not equally applied to both sides of the joint. At the knee the line of weight bearing falls to the inner side which is likely to aggravate injury to the internal lateral ligaments where most of the sprains occur. At the ankle the weight is normally distributed through the center of the joint and forward over the tarsal and metatarsal bones to the interspace between the second and great toe. Structural changes in the foot or ankle such as equinus, pes valgus, pes planus, alter the axis of body weight and are of importance in the treatment of sprains about this joint. It not infrequently happens that mild sprains of the ankle are permitted to go about with insufficient support, in the belief that physiotherapy will relieve the injury, but it must be observed that physiotherapy is most effectual when it supplements rather than supercedes surgical care. It is discouraging to the physiotherapist to see his efforts oftentimes wasted through lack of surgical coöperation; this being especially true in sprains about the ankle.

When a ligament is stretched or ruptured there is a necessary process of repair to be accomplished and this demands early rest of the joint. Extravasation of blood and its subsequent organization furnish the structure upon which the fixed connective tissue is formed, and during this period support and rest are all that are required. When uncontrolled motion is permitted, or when the patient attempts to "walk out" a sprain by energetic use of the joint, there is a probability that resolution will be delayed, and there follows a disturbance of circulation with an increase of adhesion within and about the joint which may involve adjacent muscles, tendons, and nerves and result in increased stiffness and pain. In sprains of greater severity, failure of the ligaments to repair by primary

union may leave a permanently weak joint with disturbed circulation, loss of structural tone, and muscle atrophy, which becomes increasingly difficult to treat.

Emphasis should be placed upon early and absolute rest, with firm elastic support, to prevent infiltration into the soft tissues. Support should be applied as soon as possible after the injury and maintained for a period of 3 or 4 days. In exceptional cases of a mild degree the immediate application of a static effluve will have its beneficial effect in reducing cellular edema. However, this cannot be applied in all instances and should not in any way supplement elastic support and rest. When the support is removed heat may be applied to the joint, to be followed by massage which should begin at the periphery of the injured spot and for a period of 1 or 2 days no attempt should be made to apply force directly over the torn ligament. As improvement is noted the circumference of application is reduced and, finally, direct massage and gentle manipulation at the site of injury can be applied. It is an accepted surgical practice to institute gentle voluntary movement about the injured joint as soon after injury as possible and the experienced technician who recognizes this fact will receive earlier and more lasting effects than might otherwise be the case. To assist movements and to minimize pain, I have found it is of great advantage to immerse the extremity in a hot salt bath, as this permits application of heat, massage and active movement with less pain and greater facility than may be obtained in the dry state of tissues.

When muscle irritability is diminished and local edema about the joint has subsided, stimulative treatments are indicated. Massage and increasing voluntary movements are supplemented with faradic surge, galvanic sinusoidal, static Morton wave or the Morse wave generator, to prevent development of muscle atrophy and stiffness about the joint and adjacent structures. As pain and swelling diminish and the normal limits of motion are restored to the joint, weight bearing may again be permitted. In such instances, however, it is wise for the surgeon to determine

the reaction to such use and, with the slightest evidence of a recurrence of pain or an increase in swelling, uncontrolled use of the foot should be again prohibited until such time as the soft tissues will permit.

SPRAIN FRACTURES

It is important to distinguish between articular sprains and fracture sprains as each requires a different form of treatment. In sprain fractures there is a piece of cortical bone detached from the shaft, usually adhering to the torn margin of the ligament, a fact which may not be determined by physical examination but is only detected by roentgenogram, and when it is present the duration of convalescence is prolonged and the severity of reaction is more intense than in a simple articular sprain. They should not be more disabling than articular sprains, when properly treated, but owing to the fact that x-ray examinations are not made in every instance, one of these cases may not receive the proper immediate surgical care and will, consequently, pass into a chronic state with the result that function of the joint is left seriously impaired.

Certain joints are more susceptible to this type of injury than are others, possibly due both to the character and formation of the joint and frequency of exposure to injury. The lesser tuberosity and the inner and outer epicondyles of the humerus, the styloid process of the ulna, the base of the fifth metatarsal bone, the cortical surfaces of the inner and outer malleoli, are all common sites of fracture sprains. The relative frequency of such injury at these points make it sound surgical practice to employ x-rays for diagnostic purposes regardless of the severity of the injury, and a further word of advice may be offered to the physiotherapist to make absolutely sure that the pathology in each instance has been definitely determined. Any sprain of an articular surface that develops increasing pain, and increased local circulatory reaction and stiffness about the joint, while under treatment should immediately arouse suspicion of a more serious injury.

The treatment of fracture strains is essentially surgical. It is of prime importance that

early rest and support be maintained without interruption and without motion of the joint until fibrous union has occurred, and if massage is given it should only be of the sedative type. Subsequent to bony repair the treatment is similar to that of articular sprains, being confined to restoring circulation and nutrition of the part by active and local treatment. As further progress is made, massage and voluntary motion may be increased, with the addition of stimulating electric modalities to aid in functional recovery. It is frequently found that the intensity of pain about the joint makes it difficult to apply early massage and relaxed motion but in such instances the joint may be immersed in a thermal bath of 105° to 110° F. for 10 or 15 minutes with sufficient relief to permit voluntary motion and massage without fear of disturbing the torn ligaments.

FRACTURES

The application of physical therapy to the treatment of fractures is the item of chief importance in this paper. The institutional care of fractures is of special interest to the surgeon because such lesions form a large part of his practice. Fractures are further of interest to the general practitioner who supervises their home care, and both the surgeon and the general practitioner are influenced in their care of fractures by the recent enactment of "Compensation Laws" in this country. Of recent years the treatment of fractures has unquestionably been influenced to a large degree by the advent of physical therapy. Its use has clearly emphasized that a fracture consists not only of a break in the continuity of bone but, of equal importance, an injury to the soft structures with changes in muscles, ligaments, vessels and nerves. When considered in this respect it is quite obvious that the one who assumes responsibility for these injuries must, of necessity, visualize a broader view of pathology and a more exacting diagnosis, and shall have sufficient experience with surgical and physical aids to bring about restoration of function in the shortest possible time and with the minimum of disability.

It has been said that knowledge of muscle

tissue is the beginning and end of orthopedic surgery and this may truly be accepted as a fact in the treatment of fractures. Muscles form part of a protective mechanism that puts the injured fragments at rest and guards against further aggravation. It must be observed that this is an emergency function assumed by muscle tissue, during which the neuromuscular mechanism is disturbed and circulatory changes occur which may lead to prolonged and unnecessary disability. While the surgeon should recognize this and give every assistance to the muscles in this emergency function he should, nevertheless, guard against changes in the muscles that will seriously impair their normal structure and function. John Hunter taught that the process of repair is inherent in all living tissue but it may be further remarked that the character and the degree of repair is markedly influenced by the skill and judgment of the surgeon. Each generation of medical men has offered its contribution to this subject and we may point with pride to the application in our time of physical therapy as an adjunct to surgical treatment of the extremities.

It is not my intention to burden you with the opposing theories of rest and motion as applied to these injuries but certain surgical knowledge must be accepted when we assume the responsibility of treating them with physical therapy aids. It may be said that both rest and motion are applied in the treatment of fractures but not one to the exclusion of the other. From a practical point of view we are interested in knowing when the treatment by rest ends and that by motion begins, for it is about this clinical point that the argument hinges. It is the judicious sequence of therapy that governs in the treatment of fractures and, in order that we may avoid the realm of theory and speculation and arrive at a practicable working basis, I shall divide this discussion into 2 parts, first the treatment before fibrous union, and, secondly, the treatment after fibrous union.

Let me emphasize, however, that there is no division of responsibility in the treatment of fractures. From the onset of injury to the complete restoration of function all the

therapy applied should be under the constant supervision and jurisdiction of the surgeon and when means are employed which he personally does not administer he, nevertheless, assumes full responsibility. The physiotherapist does not relieve him of this obligation any more than does the anesthetist who temporarily relieves the patient of pain, or the nurse who ministers to the daily comfort of the patient. There is a growing tendency to over-emphasize the independence of the department of physiotherapy in our modern hospitals, due to the highly technical character of this adjunct department of surgery and the complex organization required for successful application of these measures. The daily personal contact of the patient with this department and the decreasing attention on the part of the surgeon might lead to the belief that there was a division of responsibility. It is needless to mention the error of this conclusion or the injustice imposed upon the physiotherapist when such a practice is permitted. The more highly specialized our hospital organization becomes the more serious is the necessity for coöperation. It is unfair of the surgeon to employ these measures and completely detach himself from the patient in the belief that the technician will find all cases alike and be competent to surmount any surgical difficulty that may arise during the course of treatment.

Team work should be our aim and our practice in the application of these measures, the success of which will depend upon frequency of contact between the patient, the surgeon and the aide. There is no fracture that does not present constant difficulties. Maintaining corrected alignment of fragments, avoiding motion, the position of the limbs and of the joint, care of the skin and the treatment of blebs, the adjustment of splints, the control of voluntary action, prevention of adhesions in the joints, are all common difficulties that require constant care of the surgeon, and when we consider that the masseuse is expected to exercise her skill in the presence of these changeable conditions, there should be little doubt of the necessity for surgical supervision and intelligent co-

operation between the surgeon and the aide.

The treatment before the stage of fibrous union is essentially surgical, and as soon as possible after admission to the hospital a reduction must be accomplished and a fixation apparatus applied to establish the principles of absolute rest. At this time consideration should be given to the type of splint to be used to permit access to the extremity and to administer treatment with greatest facility. The initial reaction to injury is characterized by an acute hyperemia in all the soft tissues about the fractured bone. The hemorrhage that surrounds the site of fracture will undergo clotting, the organization of which is later established by fixed connective tissue cells to form the structure upon which bone cells are deposited. Muscle spasm is a characteristic symptom during this stage of injury. At first the spasm is voluntary but within a few hours it is superceded by reflex muscle spasm that becomes more intense and persists until fibrous union has been established. At first there may be an increase of synovial fluid within the joint but subsequently it becomes stiff and dry; due to loss of function and inflammatory changes both within and about the joint. In nature's attempt at immobilization all voluntary movements in the extremity are suspended, with the muscles assuming a state of voluntary inactivity that might be termed a physiologic nerve block. Observance of this state of muscle is of particular importance and should be made a guide in the early treatment of fractures for upon this natural reaction to injury we may establish the surgical principles of treatment. When acute pain subsides and the muscle irritability is lessened, it is possible to begin very gentle sedative massage and the application of radiant heat without interference with immobilization. Massage must be most gentle and should be applied distal from the site of injury, the object being to reestablish circulation and prevent muscle atrophy.

It may be observed that certain bones require more care in reference to fixation than do others. A variation in the size and shape of the bones or an inequality in the opposing muscle groups, may establish the ever present

danger of mal-union. This is also true when the line of fracture is oblique and when the fracture occurs at the same level in the shaft of each bone. Further, there is a predisposition in some bones toward delayed union or even non-union, as in the case of the upper end of the radius, the lower end of the ulna and the upper end of the tibia. This is of importance to the physiotherapist as extra precautions must be taken to see that normal repair is not interfered with when dealing with such fractures. In the presence of delayed or non-union, the surgeon may be confronted with a serious surgical problem in which there are contraindications for surgical intervention that decidedly limit his sphere of action. In such instances the application of diathermy with stimulative technic, supplemented with deep stimulative massage and active voluntary motion, may prove highly successful in securing bone union.

When treating fractures of the tibia and fibula it is possible to apply early massage and heat, especially to the toes and metatarsal structures, and to encourage relaxed movement on the part of the patient. In this respect care is to be observed that the movements do not excite reflex muscle spasm. When treating fractures of the shaft of the femur with Pearson tongs or Steinman pins, we meet with greater difficulties in applying massage and relaxed motion. When tongs are used motion of the joint should be avoided and the perforations of the skin, which are sealed with a surgical dressing, should not be disturbed. However, it is possible to secure access to the foot, ankle, and muscles of the calf, and it is desirable to begin the treatment to those parts at an early date. If the patient fails to show a spirit of coöperation in the treatment it would be inadvisable to continue until such time as the tongs are removed.

The treatment of fractures of the humerus may be ambulatory or recumbent. The recumbent treatment is my personal choice because of better control of fixation and a better relaxation of muscles. If suspension or the Thomas splint is used physiotherapy is applied with little difficulty, to the fingers,

wrist, and muscles about the forearm and shoulder girdle. Persistent cyanosis and cellular edema frequently occur in the forearm and hand but can in a large measure be prevented. In fractures of both bones of the forearm, especially in the middle of the shaft, I find that the same difficulties arise as are found in the long bones of the leg and the same care must be exercised to avoid mal-union. In Colles' fracture, particularly when impaction occurs, more liberty may be assumed in the early stages than in the case of fractures of the shaft of the bone. The fixation, usually of the molded plaster-of-paris type, permits removal of the posterior half a few days after injury and the application of radiant heat and gentle massage to the forearm. Relaxed movement of the fingers should be encouraged and in some instances actual voluntary contraction is even advisable.

The treatment of joint fractures before fibrous union offers less danger of mal-union than in the case of the long bones. In this type, however, there is the ever present danger of loss of function due to structural changes in the joint surface and the synovial membrane. It is, therefore, highly desirable that early relaxed motion be employed and in some instances actual voluntary motion be permitted. This is particularly true of fractures involving the wrist joint where perfect control of the forearm may be obtained at all times. To apply the same principles in fractures of the ankle, the fixation of the part is not so readily controlled and care must be exercised to prevent posterior displacement of the foot upon the leg.

Of all the joints of the body that suffer injury the elbow presents the greatest difficulty. Small portions of bone may become detached and subsequently fail to unite because of the irritability of muscle groups having their origin on the bony prominence. Furthermore, the position of election is usually that of flexion, during which contraction of the soft tissues occurs, and early attempts to overcome it excites muscle spasm and disturbance of bone repair. Fractures of the upper extremity of the radius are most disturbing as we sometimes meet with the production of

excess callus and subsequent interference with motion by bony block. Myositis ossificans, a complication to be dreaded, is met with in this region and when it occurs it may seriously endanger ultimate function of the joint. In fractures of the olecranon a small portion of bone may be detached from the shaft, producing an injury resembling a sprain fracture, with delayed union not an infrequent symptom due to irritability of the triceps muscle. The ever present danger of poor functional results in these difficult fractures offers many serious problems the solution of which may not always be found in the application of physical remedies.

The problem of determining the presence or absence of fibrous union is of great importance for upon this point will depend the all important consideration of beginning stimulative treatment. This is essentially a surgical problem and the aide should not attempt to decide this point without consulting the surgeon and arriving at a thorough understanding before beginning more energetic treatment. The period of fibrous union is not constant in all bones, therefore it is impossible to accept a definite schedule as a working basis. By previous experience and careful observation of the clinical findings in each case the surgeon should be able to determine the time when rest may cease and stimulation begin. Guided by the circulatory reaction, the decreasing intensity of muscle spasm, diminishing pain, lack of mobility as detected by palpation of the shaft of the bone, presence of callus as developed by the sense of touch, and the frequent use of x-rays, there should be little difficulty in determining the proper time to begin the second phase of treatment.

After fibrous union is established physical therapy can be applied with greater confidence and added energy. Access to the extremity is possible with less fear of disturbing bone repair and the patient usually permits removal of the extremity from the fixation apparatus, or at least permits axial traction to be temporarily relaxed. The muscle spasm is less intense and relaxed movements are encouraged with greater facility. If complete

confidence is obtained we may count upon the entire absence of voluntary spasm. The application of heat is continued with the radiant heat lamp or diathermy if the fracture is accessible, and massage of the stimulative type may be administered with firmer stroking movements and gentle kneading of the deeper structures. Rotary movements of the hand and fingers will relax the underlying structures and aid in restoring circulation. The direction of movement constantly approaches the site of injury with care to avoid the areas that excite reflex spasm.

Relaxed movement supplemented by massage is given frequently enough to prevent the development of firm resisting adhesions within the joints adjacent to the fracture. The limit of movement is fairly well established in this instance by reflex muscle spasm and pain, but as progress is made and the spasm becomes less, the range of motion increases. Fractures that are subject to delayed union may have special consideration and may prove an exception to this rule until bony repair has been established.

Voluntary motion is avoided in fractures before fibrous union except in certain instances, but after fibrous union it is encouraged. The movements should be slow and deliberate at first but subsequently increasing in force and range, beginning in muscles distal to the fracture and continuing to muscle groups whose axis of force is least disturbing to the injured ends of the bone. After bony union the therapy becomes more stimulating and movements are supplemented with mechanical stimulation. The Bristow coil of low voltage is particularly useful in preventing muscle atrophy and developing power by delicately controlling muscle contraction. It is simple in operation and small in size and gives splendid results. It offers the advantage of selecting certain muscle groups for stimulation and avoiding others. It is useful particularly where coöperation of the patient is difficult to obtain.

At this point the fixation apparatus may be dispensed with entirely. The case that remains under the watchful supervision of the surgeon may receive this advantage at an

earlier date than one that is less carefully followed. Increasing attention is here given to the larger joints to overcome the limitation of motion associated with non-use during treatment. Diathermy of a sedative type followed by active movement and manipulative stroking of the soft structures about the joint ought to be encouraged. Circulation is improved with the use of contrast baths or whirlpool baths, and deep massage, and muscle atrophy disappears under the rhythmic contraction of the faradic stimulation, static Morton wave or galvanic sinusoidal current.

Treatment of fractures to the extremities is not complete until function reëducation has been established and muscle coördination has been obtained, and this is only possible when direct voluntary control of the muscle activity is under the supervision of the patient's will power. It has been the custom to depend upon the patient to obtain the control of this function himself but it is more desirable, when the organization will permit, that these muscle exercises or medical gymnastics be placed under the supervision and watchful care of a competent instructor. With this an accomplished fact the period of adaptation is more readily and successfully established.

DISCUSSION

Dr. Harold D. Corbusier, (Plainfield): I am sorry I didn't hear all of this paper. The part I heard was of a great deal of interest to me. I think Dr. Doran has touched upon a very important subject, and that is the use of mechanical or physical means in the treatment of various conditions. This subject is one which has been neglected, I think, since the war. Of course, during the war we did a great deal. Since then we have sort of slumped and a great many men have been doubtful as to the value of various physical therapy forms of technic. Of course, there is no doubt about the fact that in the present day there is a great deal of physical therapy, so-called, that is more or less bunk, you might say. That is, there are certain men who are over-enthusiastic about what they can do with physiotherapy. Nevertheless, that does not mean we should not use physiotherapy: it means we should select from the various modalities those things which we know are of value and which have been proved to be of value.

I have my distinct ideas about the treatment of weak-foot and flat-foot. I was sorry to hear the Doctor mention metal plates. Of course, I know that a great many others, some eminent surgeons, too, use a great many flat-foot plates. I used to do it until I learned better. I think the treatment of flat-foot and weak-foot—weak foot includes flat-foot and a good many of the other conditions—is primarily a physiotherapy affair; that is, without physiotherapy you cannot treat

the foot the way I think it ought to be treated. When we speak of the foot, we don't speak of the foot meaning only the foot, we mean the leg, we mean the posture of the individual and we mean a great many different things.

As the Doctor said, exercise of the muscles is an extremely important thing, also the standing of the individual, the posture, and a great many other things that come into this treatment. But primarily it is a physiotherapy affair, except of course in some cases of rigid foot where you have very much deformed tarsal bones, especially in the astragalus, in the scaphoid, some of those cases do require operation. There are not many of them. Some of them do require a wedge osteotomy, but primarily in the treatment we find that we can do without metal supports, because we don't want to support that arch, for instance, in a flat-foot; we want the patient to develop his own arch, if he can.

Just the fact that there is a flat arch there doesn't mean anything at all. As you know, there are many people with flat-feet who do not have symptoms. There are others with very high arches that do not have symptoms. It is a question of muscular development and training the individual how to stand and how to walk. The only thing I use in the way of support, which you might call a support, is at the end of a certain period of treatment and the patient has gotten the exercises down pretty well, then we put on a little flexible thing we call a girdle under the foot. That is to guide the foot in the position of inversion and synchronization.

In the treatment of fractures I think physiotherapy is quite essential. The only thing, of course, is now our hospitals are not properly equipped and that is quite sad, because we will often see a case put up in plaster-of-paris, we will say a fracture of the femur, which has been in plaster for some time, too long in a great many cases. You take that cast off and what do you have? You have a healed fracture, perhaps, but you have a knee that is so stiff that the period of disability of that patient is going to be a great deal longer than if you had that fracture treated in an open splint, a Thomas splint, something of that sort, so you could use physiotherapy at the proper time as Dr. Doran stated. I think his ideas on that are quite excellent.

Dr. David F. Weeks (Skillman): I enjoyed very much hearing the papers read by Dr. Martin and Dr. Doran. I want particularly at this time to pay my tribute to Dr. Martin for what he has done for me. Some of you who know me well, are aware that a little over a month ago I came to Atlantic City scarcely able to move either my right leg or left arm. Through the skillful treatment of Dr. Martin, I am now able to move them both with some degree of comfort and expect soon to get back where I can play football, baseball or do anything else.

One thing that was not mentioned in either of these papers that I think should be stressed, is the fact that ulcers can be healed and Vincent's angina cleared up with the quartz light. This has been frequently demonstrated on cases admitted to our institution. We all appreciate how difficult it sometimes is to get satisfactory results in these cases and for this reason I think this form of treatment should be borne in mind when these cases come to us.

Dr. Elmer P. Weigel (Plainfield): I wish to express my appreciation to Dr. Doran (I didn't hear Dr. Martin's paper) in reference to the question of physiotherapy, particularly in the treatment of

fractures. I think almost all of us are agreed it plays a very important part in the after care of this difficult type of case, and yet I think there is a tendency in a great many cases, particularly if our departments are not sufficiently well organized, to probably bend over backward to the idea of giving our patients early joint function, and very frequently we lose control of the fracture side itself. We probably, as Dr. Corbusier here mentioned, have had more experience in this type of work in the army than we have had in any individual services since then. When we had large, well-developed organizations, to treat a large number of cases, it was not so difficult to do these things as they should have been done. However, at the present time my particular experience has been that in most hospitals we do not have large enough services to develop organizations which can treat these things amply and often.

The early removing of fixation dressings, I think, results in probably not entirely what might be called mal-union, but bending, particularly in reference to fractures of the femur. I have seen quite a few cases where the fixation has been removed too early in order to encourage physiotherapy and in the end result, although the joint function was possibly better than it would have been, the actual results of the fracture itself were not what they might have been had the fixation been longer established.

In fractures of the forearm, it is a great deal easier. I think in your major fractures, particularly speaking of femur fractures, there is a tendency to remove fixation too early, to institute physiotherapy which sometimes results in some bending and mal-union.

Dr. William Martin (Atlantic City): There seems to have been very little discussion in reference to my paper. Dr. Weeks spoke of the two conditions which were not mentioned in the paper and with which probably some of us in private practice have had very little experience. I can see where radiant energy or some of the other forces might have great value.

There is one thing in connection with Dr. Doran's paper that I would like to discuss, if I have that privilege. That is in reference to flat-foot or its component condition, the relaxed arch, not an absolute anatomic deformity. In many of those cases I have found as a very definite cause of that relaxation, an inflammation of the sciatic nerve and its branches, particularly those that involve the arch. If you have an inflamed nerve, no matter to what part it goes, there will be a lack of nutrition in all those muscles which it supplies. Muscle and ligament nutrition depend upon a healthy nerve as well as upon a proper circulation. When this is not the case, all tissues suffer, and the foot muscles and ligaments are not exempt. This applies to the calf of the leg as well in which you get muscular spasm, a fairly constant accompaniment of relaxed arch and sciatic irritation. The treatment as he outlined it, is in accord with the present knowledge, but in addition to that I think the electrical treatment of the sciatic neuritis is very necessary, and in my experience it is the one thing that has been lacking in a great many cases that have been in the hands of orthopedic surgeons. Just as a fitting climax the treatment of that sciatic neuritis has seemed to bring the result, when otherwise failure might have been inevitable.

Dr. William Doran (Jersey City): I would like to say that the reason I brought up the question of acute foot strain was the fact, just as brought out here, it touches the interests of a great many

of us, particularly the orthopedic surgeon, and I felt that it is somewhat disappointing to find that a great many of the doctors in general do not seem to grasp the significance from the patient's point of view. Most people having foot trouble are lacking in sympathy from everybody else. I suppose we all feel it is so common. I brought it out at this time, or at least a part of the foot question, in the hope that this point might be emphasized.

I purposely termed it "acute foot strain". I didn't mean by that I was going to include all the difficulties that arise in the feet, the relaxed foot, the various types of flat-foot and weak-foot. I assumed you were all interested in them and didn't care to discuss them. I wanted to emphasize that particular point of what I call acutely painful foot strain, and as it comes up very frequently in surgical practice. The patients have a fracture of the leg and they get excellent surgical care, are discharged from the hospital and from the doctor's office, and for a period afterward, there is a certain disability in the foot. In some instances it may spontaneously recover, but in certain other instances it does not recover. In that case, you get what I call this slowly developing condition which may reach a climax and develop an acute muscular fatigue. It was that particular part of the foot trouble I wanted to emphasize. In those cases, as you know, there is always some defect preëxisting to the condition, because I don't believe that strain applied to normal structures and normal tissue could produce a condition of strain which would not recover under spontaneous resolution.

The discussion which Dr. Weigel brought up in reference to the treatment of joints was something that I think should be emphasized again. We not infrequently find that our vision is focused upon little things in the treatment of fractures. Some men seem to lose sight of the fact that bony union must take place, and by that I mean sometimes over-emphasize other things, and one of them, especially in the long bone, is the dread of not getting movement in the joint after they are through. I think that, as Dr. Weigel has brought out, is a very important point because our energy to try to get that movement may interfere with primary union and you may get cases of delayed union without knowing that you are running into trouble. So I tried to emphasize that point in the paper and I think a safeguard against it is the fact that if you keep your mind on the fibrous union in the bone and are not too energetic before you get fibrous union, you will probably avoid that error in delayed union, and from there on your treatment of joints will be very easily handled.

In reference to Dr. Martin's question on sciatica, that is a very interesting point he brings out. It has been suggested that the primary cause, or one of the primary causes of our foot defects, which precedes this foot strain, is a disturbance in the neuromuscular mechanism, especially over the posterior tibial nerve. It has been suggested that a weakening of the interossei and lumbricales muscles may be due to an essential neuritis, the neurotrauma or systemic causes and the disturbance of function of the interossei and lumbricales which disturb the forefoot may be the beginning of our foot trouble. That has been mentioned on several occasions and I personally am quite enthusiastic about that point. In keeping with the same idea in sciatic neuritis of systemic origin, it would have the same effect, especially over the tibial nerve.

THE PRESENT STATUS OF DIATHERMY IN PNEUMONIA

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Society of New Jersey, Atlantic City,
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About 1916 the possibility of using diathermy in pneumonia was mentioned by two American writers who reported favorable effects from the treatment. They had secured no check-up on diagnosis, and no further use of this treatment was reported until the paper, "Diathermy in Pneumonia, Report of 10 Cases", appeared in the American Journal of Electrotherapeutics and Radiology, October, 1922. The writer, who presented that report following his work in the U. S. Marine Hospital, No. 21, New York City, which began in January, 1921, had no knowledge that diathermy had ever before been used in this disease. Its clinical trial was due to the fact that there was a high mortality rate in a group of pneumonias treated in our hospitals during that winter. It was felt that the use of diathermy through the lung would be perfectly safe, with proper technic, that it probably would relieve pain, and might in other ways favorably affect the course of the disease. The Medical Officer in Charge, Col. George B. Young, and his medical staff were most interested and coöperative in the use of this measure. The first treatment was, however, postponed until we had a case which was classed as hopeless. The patient was a merchant seaman in the eleventh day of an extending pneumonia. He was rapidly losing ground and his relatives had been notified of his impending death. The clinical improvement during the first treatment seemed to us, at that time, most remarkable, although it has been more than duplicated times without number since. His improvement continued with subsequent treatments and he made an uninterrupted recovery. This interesting result in a single case proved nothing but led to extensive clinical trial of diathermy in this disease.

The knowledge that pneumonia differed so widely in mortality in different epidemics, and according to the predominating type, made it extremely difficult to judge whether or not this particular treatment was of any real value. Many are the forms of treatment which have been tried, at first thought valuable and finally discarded, in an effort to lower the high mortality of pneumonia. Our first care was to have all the cases x-rayed, typed, and clinical findings recorded by the regular medical staff. Our department of physiotherapy was concerned only with application of the treatment. The results in the first 10 cases reported, as mentioned above, were so satisfactory that we were requested to treat all the cases in the hospital. Again it was apparent that if this treatment was of any value, and if the medical profession was to be impressed by its possibilities sufficiently to give it wide clinical trial, controls must be used. During the next year that was done in the Marine Hospital, all patients receiving supportive treatment in the same wards and by the same physicians. The mortality of the controls was 42.9% and of the treated cases 19%. Since that time similar groups of treated cases, with controls, have been reported by: Henry V. Broeser, St. Mary's Hospital, Hoboken, N. J.; H. C. Westervelt, Passavent Hospital, Pittsburg, and Grosbeck F. Walsh in the hospital of the Tennessee Coal, Iron and Railroad Co. In every group, in the hands of different men, symptomatic improvement, later to be described, occurred and there was a lessened mortality ranging between 50 and 75%.

Two other striking groups of cases indicating the probable value of this treatment occurred in institutions where pneumonia had been particularly fatal. One, the Institute for Feeble Minded Children, at Glenwood, Iowa, by T. B. Lacey, and the other among the miners of a leading zinc company in this state, by William E. Brown.

Satisfying as our early results seemed to us to be, they were of less value than those now obtainable, for several reasons.

In the first place, the chief of our medical service feared the hypotension which was

marked in some cases and always slightly increased by diathermy. In a number of early cases treatment was discontinued for this reason, and a number of patients died whom we believe in the light of present experience, might have lived had the treatment been continued. Secondly, the treatments were done by a small overworked personnel, and 2 treatments per day was the maximum that could be given any patient. Now we treat every 3 or 4 hours in severe cases, and intensification to the point of treating for an hour on alternate hours, continuously, has been successful in several apparently hopeless conditions. In the third place, there developed a few cases of empyema, roughly three-fifths of the number to be expected out of the total of pneumonia cases treated. Here, too, the treatment was discontinued fearing a dissemination of infection, and a number of deaths occurred.

Our subsequent experience leads us to believe that diathermy should have been continued as it now is, that no dissemination would have occurred, and the surgical indications for aspiration or resection remain as usual. As these early mistakes were all based upon conservatism they may perhaps be condoned.

The changes from our early technic just mentioned; increased frequency of the treatment in all severe cases, increased time and dosage when conditions are critical, and continued treatment in the presence of empyema, have been further amplified by the use of larger electrodes to include much of the uninvolved area of the lung.

The symptomatic effect of the use of diathermy in pneumonia is now thoroughly established. Cyanosis, when present, is almost always lessened; the pulse is slowed a few points, steadied and increased in volume; the amplitude of respiration is increased, especially in the presence of pleuritic pain which is itself considerably relieved. There is a tendency for the patient to obtain a few hours of restful sleep, and for him to be encouraged in his battle with the disease, by the improvement obvious to him. It seems quite probable that these factors alone are sufficient to

turn the tide in many cases hanging in the balance.

Perhaps the most striking symptomatic effect, however, which demonstrates clearly that diathermy has some definite effect on the disease, is the fall of temperature by lysis, even when starting treatment on the second day. This occurs occasionally in untreated cases, but it has been present in over 97% of the 370 cases in our series. Such an incident could not be accidental.

Our mortality is now slightly under 12% and is steadily decreasing, and this in face of the fact that a great many of our cases are severe, for, until the profession is thoroughly aware of the effect of this treatment, cases doing well often do not receive treatment. It is interesting to note in this connection that only 2 cases in this series, in which treatment was given before the third day, have terminated fatally. This is undoubtedly due to the greater possibility of affecting the circulation before the period of gray hepatization begins.

After many papers such as this, the writer has been asked the question—"What would the effect of diathermy have been on influenza pneumonia, occurring in the 1918 epidemic?" We have thought it probable that it would not have been of as much value, since the pathology in those cases was so different. However, quite a group of cases of hemolytic streptococcus pneumonia, clinically identical to those seen by us in 1918, have occurred this winter, and to our surprise the treatment has been even more efficacious than in pneumococcus pneumonia. We had only one death in about 26 cases of hemolytic streptococcus, and that patient died of a blood-borne peritonitis one day after treatment of the lungs was discontinued. Most of the cases, however, were seen quite early, again emphasizing the importance of that point.

Clinical data, apparently demonstrating the value of this treatment, is rapidly accumulating in this country, quite a few papers on this subject having appeared in recent literature. A notable article is one by R. P. Forbes, "Diathermy in the Treatment of

Pneumonia", Archives of Pediatrics, June, 1927. Following the writer's paper on this subject, read before the Royal Society of Medicine in London 2 years ago, and which was published in the British Journal, reports of series of treated cases have come from South Africa and many other British Colonies. The unanimous opinion of all of those who have followed the treatment of a considerable series, as to its value, is certainly sufficient to justify open minded trial of this method. What has been lacking has been laboratory confirmation of the obvious changes in the clinical picture of treated patients. This has now been supplied by 4 reprints from the Rockefeller Institute, by Carl A. L. Binger and Ronald Christie. Some rather crude experimental work has recently appeared in the literature tending to demonstrate that diathermy passed through the superficial tissues with a surface effect and that the central tissues could not greatly be elevated in temperature. Practically all of these experiments were based upon an extremely rough milliamperere meter reading and faulty deductions therefrom. The Rockefeller investigators, on the other hand, placed thermocouple needles within the lungs and chest wall, connecting them with a galvanometer, which permitted of extremely fine and accurate temperature reading. They found that the heat actually went through the lung; that a temperature rise in the normal lung of nearly 9° F. was possible, and that this temperature was accentuated in the presence of consolidation. By chilling the chest wall beneath the electrode, they found the central temperature undiminished from its maximum under the current, showing that heat conduction from without was no factor. Their further investigation will be to determine exactly the increased respiratory excursion and blood oxygen saturation, both of which seem clinically to result from treatment.

Summary: Diathermy in pneumonia is, in skilled hands, an absolutely safe procedure. Many thousands of individual treatments have been administered without a single untoward effect. Obvious symptomatic improvement felt by the patient and readily observable, is

the rule. The temperature falls by lysis in nearly every case, conserving for the body that large amount of energy which would otherwise be expended by sustained high temperature. That patient who does not improve symptomatically under diathermy, presents a grave prognosis. The writer has treated, studied and tabulated his cases for 6½ years. This group includes many different epidemics with varying mortality and all types of the disease including streptococcus cases. It is only within the year that any claim has been made for lowered mortality under diathermy treatment. The writer's mortality figures, together with those of very many others, now running into thousands of cases, seem to have established this point beyond any doubt. Many interesting points could be developed in favor of the use of diathermy over that of serum. Diathermy is applicable to all types, and no delay for laboratory report is necessary. There is no increased illness comparable to serum sickness, and no sudden deaths like those from anaphylactic shock. Where serum is indicated there is no reason why diathermy cannot be combined with it, nor do any other factors in routine treatment need to be postponed or omitted because diathermy is used.

Through these years of the steadily increasing use of diathermy, the writer has been encouraged by no other factor as much as this, that with the exception of 1 or 2 cases, the family physician or consultants who have carefully studied the effect of diathermy on the patient, have been convinced of its value, and have joined the ever widening circle of those who recommend its employment, at least in all severe cases. Several of the largest and finest hospitals in the country are already using diathermy routinely in every case of pneumonia. The writer would earnestly recommend a clinical study of the effect of diathermy in pneumonia by the members of this society.

DISCUSSION

Dr. Henry A. Cotton (Trenton): While we haven't had a great many years' experience in diathermy, I just want to say a few words in regard to the success we have had. In relation to pneumonia, we have had some very interesting

cases. The first case we tried diathermy on was an influenza pneumonia in an attendant of the hospital who had been sick about 3 days; temperature was high, delirious, lungs apparently filling up. The late Dr. George Moore was attending her. It looked pretty hopeless, one of those very rapid cases that looks as though nothing will stop it. We tried diathermy. She had a very rapid convalescence. Her temperature never went high again, but gradually decreased, and in 10 days or so she recovered and has remained well.

That case was, to me, a very striking example of the possibilities, although I knew very little about it. Of course, we could say she would have gotten well anyway. I don't think any of the staff or those in attendance would have cared to make that statement, because everything pointed to a very fatal type of pneumonia.

Since then, we have used it on a great many cases, postoperative pneumonias, pneumonias among the employees and patients as well, and I want to say I consider it a very valuable adjunct in treatment.

To say a word about the surgical side of the problem, we have had a diathermy department now for some years. We used to do, as you all know perhaps, a great deal of surgical work on the colon. The last 3 years, I would say that 90% of our surgical work has been eliminated by the use of physiotherapy. We use our colon irrigations; on alternate days, using diathermy, the Morse sine wave, and so forth. The only cases that it is not applicable to are the cases where you have congenital bands around the hepatic flexure, cecum, or in the splenic flexure; these bands are omental in character, very large, tough, and, of course, diathermy cannot help them.

We use it routinely on our cases with intestinal stasis and toxemia and it has been really a remarkable success. Coming from those who have seen the mechanical side of it, probably, as we did for a number of years, I think we would be naturally rather opposed to palliative treatment; at the same time, after trying the method, we have become convinced that it has eliminated 90% of the surgery.

In regard to gynecologic conditions, we use the diathermy in cervicitis—electrocoagulation—and it is very successful. The fact is we do not do any Stermdorf operations or surgical enucleations any more except in very bad laceration. It can be given in these cases without an anesthetic; it isn't really an operation; there is no pain connected with it. The infected tissue is all removed, treated, and in the course of 2 weeks we get a perfectly clean, fresh cervical tissue, granulated without any infection. I don't know how we could run a hospital without a physiotherapy department.

Dr. H. J. Perlberg (Jersey City): I believe one of the most important statements made by Dr. Stewart is in the first section of his conclusions, in which he states that the application of diathermy in the hands of skilled men is most important. I feel that the condemnation of this method arises principally from men who without a proper knowledge of the technic and a proper check-up by means of x-rays and the laboratory, treat this disease empirically. These are the men who do not get the desired results. I just want to emphasize that one particular statement. In my experience, I have found that this method, when applied properly and carefully checked, is productive of extremely good results and should be used in most cases of pneumonia.

Dr. William G. Schaffler (Princeton): I was very much interested indeed in Dr. Stewart's paper. The question that comes to us general practitioners, however, is this: Is there any hope for our private patients in the use of diathermy? Is it possible to do this work in private houses by, of course, getting the services of some efficient man to do it? Is there portable apparatus that can be used practically? Are there any statistics yet as to whether this method can be carried out in private practice as well as in hospital practice?

Recording Secretary Morrison: I would like to add a word of warning. The statement has been well made here that results can be secured by treatment by diathermy in the hands of skilled operators. It is very well put. The treatment by diathermy is one of our latest advancements in medicine and is being carried on very extensively. We have had this year one suit brought against a member of this society for a burn on the wrist by simply office treatment, where the amount of current either was not properly registered or the operator did not talk to the patient often enough to elicit the fact that a burn could be possible, or the treatment was carried on too long. Again, I advise all of you who are doing any type of work similar to this to protect yourselves with the proper insurance.

Dr. William Martin (Atlantic City): Just one word along that particular line. My attention has been very recently called to the fact that a certain agency for high frequency apparatus put it before the profession that without any previous knowledge of physical measures and in one hour's teaching by the technician or the salesman, a physician or anyone would be amply fitted for giving any treatment along these lines. Fortunately, that statement has been blocked. I took it up both with the agency and with the company who made the machines and they have promised to advertise honestly in the future. I don't want you fellows to be fooled. One hour's knowledge of diathermy cannot possibly put you wise to treating pneumonia or any other ailment.

Dr. Harry E. Stewart (New Haven, Conn.): Nothing more valuable could have come out of this discussion than the last 3 speakers have mentioned. If somebody asked you, "Is the knife good for an acute appendix?" you would smile and say, "It is the hands and brain of the man who has hold of the knife that counts".

However complicated your piece of electro-medical apparatus may be, it is merely the tool by which you apply your knowledge of technic to a given condition. It isn't the machine that does the work.

That point Dr. Martin spoke of cannot be emphasized too much. One of the leading surgical apparatus houses in the West advertised some time ago in yellow and black lurid print, "Increase your practice \$5000 to \$10,000 a year. Learn it in an hour."

The dose of strychnin is a 1/60 to 1/30 gr., that is all we have to remember, but diathermy dosage is determined by the milliamperemeter reading, the size of your electrodes, the length of tissue pathway, the efficiency of the circulation in it, its degree of density, the presence or absence of normal sensation, and about 4 other factors; something like 13 different factors on which dosage is determined. So when the high-pressure salesman comes in and says, "Doctor, turn that knob and pull that button and go ahead with your treatments", you see it isn't quite like that.

Most of our late work has been with private patients and it is our custom to take portable apparatus to the homes and have a skilled technician as a special nurse on the case. It can be very well handled in that way.

I did not speak of contraindications, and one might well be suspicious of any method in which no contraindications are mentioned. The only one so far that is established is where too sudden resolution occurs, with symptoms of toxin absorption, and there we stop diathermy immediately. The technic, of course, is of importance.

Roughly, we use electrodes of composition metal, about 8 x 10 inches. Our average treatment is about 1800 milliamperes for 35 to 40 minutes. In the Cleveland Clinic, under Crile's direction, Dr. Portman has done some very valuable work in postoperative pneumonia, in fact, I think he has practically eliminated that condition in the clinic. Their efforts in the treatment of postoperative pneumonia were most successful, and now the temperature reading and the careful examination of the chest leads to early diathermy if there is any indication at all of a bronchitis developing postoperatively. If I am correct in my belief, they have had no postoperative pneumonia in quite a little while.

It is not the possession of an Albee electric bonesaw set that makes an orthopedic surgeon, and it is not the possession of diathermy apparatus that makes a physician a physiotherapist. That point should be kept in mind, rather than insurance. Let the physician be prepared with special knowledge of his work, and he will seldom need any insurance.

COÖRDINATING THE PHYSICAL THERAPY DEPARTMENT

S. T. SNEDECOR, M. D.,
Hackensack, N. J.

(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 7, 1928)

The Physical Therapy Department is one of the most important branches of our hospital. It is the most useful because it is a department of therapeutics. Our department specializes in treating the patient; and sick people want to be treated, to have something tangible done for them.

Someone recently said that we study too much the science of medicine and not enough the art of practice. While diagnosis may be the more important, nevertheless, the patient wants treatment and our part is to give the treatments. The osteopaths and chiropractors challenged us because they treated the patient; physical therapy is our answer.

This is the age of electricity. People accept all the wonders of electric energy as necessities of the day. The radio is commonplace in every home. So, also, the public accepts electrotherapeutics. They believe in it because they hear about so many remarkable things that it does. You do not meet with resistance when you suggest electric treatments. People ask for them. Our part is to give them the proper treatments.

Is it any wonder then that the Physical Therapy Department is in demand in our hospital. Last year, in the Hackensack Hospital, we gave 14,349 treatments to 7,451 patients, an average of over 25 patients each working day. These figures tell you that in our hospital of 250 beds the Physical Therapy Department is of large service. Half of our patients are out-patients. Furthermore, our department is self-supporting. Keep that in mind when seeking new equipment for the Physical Therapy Department.

Of what does a Physical Therapy Department consist? First and foremost, a director who is a physician and so interested that he will give largely of his time. A technician cannot properly run a department; that is an important fact that we must all come to recognize. The director organizes the staff. The head technician should be a graduate nurse because she will better understand the care and comfort of the patient. The nurse is competent to replace dressings and her training makes for neatness and fits in with the hospital organization. Then, as many "assistant technicians" as may be necessary. In addition, we train the student nurses to do massaging. Two weeks out of their regular curriculum is spent in such work.

Prescribing treatments is an important duty of the medical director. At first, the doctors referred patients to us for electric treatments or physiotherapy. At most they suggested baking and massage. Now, they are beginning to suggest specific therapy such as ultraviolet light or diathermy. Until all physicians become entirely familiar with the indications for different physical measures it is better that they suggest and the director prescribe the details of treatment. In one of New

York's larger hospitals the director is badly handicapped because each doctor prescribes his own treatment. Consequently, one doctor nearly always suggests incandescent light and another the whirlpool bath. It is usually necessary for the director to see the patient in order to prescribe the proper treatment.

The director must supervise treatments; one may almost say that he should see every treatment that is given. There are many reasons why the doctor cannot just say "diathermy to the shoulder, 6 treatments, report back in 2 weeks". For instance, diathermy to the shoulder is a difficult procedure. There are several methods and one should be selected to suit the individual case. It may be advisable to change it at the second treatment. Also, one cannot rely upon technicians to think of the disease and carry out treatments as the physician would. How often do I find them with their lamps focused on the wrong spot, or exercising the wrong muscle, or when they might better use a different applicator or method. Symptoms and indications often change after the first or second treatment. Perhaps the whirlpool bath might better be substituted for diathermy, and sine wave exercises added.

Records are just as necessary to the Physical Therapy Department as elsewhere in the hospital. On every chart we place our blue Physical Therapy sheet with each treatment recorded and there is space for the director to note frequently the progress. We find that the doctors want to know what treatments have been given and ask frequently for our opinion of progress.

The future of Physical Therapy development lies in its usefulness to each of the divisions of medicine. We are always demonstrating how we may be useful to the other departments. Briefly, I will enumerate how we assist the other branches of medicine: From surgery we receive a great many cases, mostly traumatic injuries, infected wounds, sluggish ulcers, cervical glands, cases of shock, abdominal adhesions and burns. The orthopedic men send us a majority of their patients to work upon. The genito-urinary service refers many specific infections of pos-

terior urethra, prostate and epididymus; tuberculosis of genito-urinary tract, congestion of prostate. Gynecology asks us to help with gonorrheal infections of all sorts, and we can be of service to them in many ways that have not as yet been developed. Medicine refers all cases of pneumonia for diathermy; that is a standing rule. I have a carefully recorded series of over 75 cases with splendid results. Bronchitis, pleurisy, arthritis and constipation are other conditions treated in our department. For the children's service we gladly give daily "sunshine" to many of the forlorn kiddies. We give them ultraviolet when they are convalescing from all sorts of things and especially for rickets, malnutrition, tuberculosis, glands, colds and chest conditions. We are now helping the eye, ear, nose and throat men to clear up draining mastoids, deafness, gonorrheal ophthalmia, sinusitis, laryngitis. Neurologists find our work valuable, as we test and treat all manner of paralyses and the toxic neuroses.

Coördinating our treatments with other hospital activities makes our department useful. We will give perhaps only one of the 2 or 3 treatments that are necessary for the welfare of the patient but we must do our share at the proper time and in the proper way. If bedside treatment is desired we send apparatus to the room. Frequently we have to do dressings in the treatment of wounds. In all cases we would emphasize that our treatment is only one phase, sometimes a small part and sometimes most important, but it must fit in with the other methods of treatment to form one coördinating unit.

Development of the educational side of the Physical Therapy Department is strikingly needed. Most of us graduated before physical therapy was ever mentioned in medical schools. We must all learn something about it somewhere. Our local hospitals are the greatest teaching centers available to all of us. It is there that our work is always open for inspection. I find the doctors receptive and even eager to learn about physical therapy treatments. The position of director is one of constant opportunity to teach, show and suggest. I hold frequent clinics. I make

rounds with the medical staff, the surgical staff and the visiting physicians, suggesting where physical therapy treatment might be of advantage or asking for a stubborn case to see if I can improve the condition with physical methods. Our doctors are only too glad to help me. Anytime our department is slow I go through the wards and come back with 5 or 6 new cases to treat. Access to all ward patients for examination, that I may suggest treatment, is one of the prerogatives granted me by the medical board. Now our physicians are thinking of physical therapy treatments. They order them on the chart as they do any other remedy. For instance, for a case of arthritis they may write—"salicylates, colonic irrigations and physical therapy or radiant heat"—to be specific. The pediatrician writes out a formula for the baby and adds "ultra-violet radiation daily". We urge the definite prescribing of physical measures.

The slides which I will now show you illustrate the equipment of our department, which is reasonably complete. It consists of various heat lamps, bakers, deep therapy lamps, electric cabinet baths, diathermy machines, endotheun knife, sine wave apparatus, static machine, whirlpool bath, shower, carbon arc, air-cooled and water cooled quartz ultra-violet lamps.

The Physical Therapy Department has enormous usefulness and value. With its aid we are able to accomplish end-results never before attained. To do this, however, it must be properly organized, equipped and supervised, and coördinated with all the other branches of the hospital.

DISCUSSION

Dr. Charles R. Brooke (Newark): I can only emphasize the remarks of Dr. Snedecor. In addition to specialized work in ear, nose and throat conditions by physical measures, I have been associated with government hospitals and clinics during the war and, since the war, in charge of the physiotherapy departments. We have done a tremendous amount of work and Dr. Snedecor's plan is the same that we have used in the hospitals and in the out-patient departments. I think this work plan is very important, especially since the new hospitals are beginning to put in physiotherapy equipment. A few years back it was the tendency for each section, for instance the medical, the pediatrics or the orthopedic section, to put in a diathermy or some other machine; another section would install an Alpine sun lamp; another a heat lamp, and the treatments were more or less given here and there at random,

with the consequence that the hospital did not really have a physiotherapy department. Institutions are realizing that the physiotherapy department should be combined as one unit, centrally located. All physical apparatus should be combined in one department and under a medical supervisor. All treatments should be observed daily and new treatments prescribed from day to day, if necessary. In this way patients will reach maximum improvements very much sooner than by going to this department and that department and possibly being treated by a different aide, nurse or doctor on different visits.

The physiotherapy work in the government clinics is now handled so that all patients are referred from the different departments, realizing that they are benefited more rapidly and reach maximum improvement much sooner than by treatments in the individual departments. The nerve testing work is very important and certain forms of paralysis and injuries of the nerves should be tested before treatment. They should be tested by one with a thorough knowledge of the use of galvanic current.

You will find perhaps when a physiotherapy department is established in a hospital, the doctors from the various sections will often attempt to prescribe treatment with very little knowledge of the action of that particular physical modality. This will lead to an indefinite and vague treatment; for instance they will say "galvanic current", or they will say "electrotherapy", or they will say "heat". Well, we know that is a very indefinite prescription. Therefore, the medical supervisor of the physiotherapy department should have a free hand to prescribe the various modalities that are indicated in that particular disease or injury.

Dr. Harold D. Corbusier (Plainfield): This paper was very interesting to me because we in Plainfield are just organizing a small physiotherapy department. The things that we must consider in organization of a department of that kind are important; first, we must have a director, a medical man, a director who knows physiotherapy, not a man who has, for instance, knowledge of the application of physiotherapy to one branch only, but one who can apply it to all branches of medicine and surgery. That, of course, is a very important thing and it is difficult in most towns to find a man who has had sufficient experience to assign him to a job of that kind. Of course, he can learn, but I do not agree with the Doctor in saying that your physiotherapist, your physician, can be trained entirely by observation at a clinic, especially a small clinic. A great many things have to be learned or taken into consideration. To learn physiotherapy so you are able to apply it to all forms of medicine and surgery really takes a trained man who should go to some place where a course is being given. There are several schools where this can be obtained. Unfortunately, in colleges, so far, with the exception of a few instances this instruction cannot be obtained. There are schools like Dr. Stewart's and others where a medical man can get a good training, and I think he should not undertake to direct a department unless he is well trained.

Next we should consider our technicians, our assistants: who shall they be? They cannot be people who are advertised, who are trained, so-called, by a Chicago electric firm, who probably have an exhibit here now, in 3 weeks. Of course, that is a very dangerous procedure. They should be either graduate nurses or they should be graduates of schools of physical education, good schools

where they give sufficient training in anatomy. As you know, many of those schools give far better training in anatomy than the nursing schools do. Therefore, I do not agree with the Doctor that a nurse is the one primarily who should be the technician, not necessarily at all. As a matter of fact, in the army we had practically no nurses as technicians and we had some very expert technicians who were not nurses. The fact that a technician does not know the niceties of dressings, and so on, has nothing to do with the subject; she should be taught. If she hasn't had the training in a nursing school, then she should be taught. If she is not capable of being taught, she is not capable of being a good technician in physiotherapy.

Of course, combining all physiotherapy efforts in a hospital into one department is the only way to do it. You can't have each department owning its apparatus and attempting to treat the cases. The best way is to have a single department, but I can't lay too great emphasis on the fact that you have got to have somebody who knows his job to direct that department, and you have got to have competent technicians because this is a very important thing, they are handling apparatus which is dangerous to handle and you can very easily find cases all over the country that have been handled by osteopaths, and some physicians, where a good deal of damage has been done. So that training of the aides, the assistants, the technicians, is extremely important.

I might just say here that there is an organization of aides, physiotherapy technicians, called the American Physiotherapy Association, which admits only aides who are properly trained. Any man wishing to get fully trained aides can get them through this association, because they do not recommend anybody unless she is properly trained. There are too many untrained people handling this apparatus.

Dr. S. T. Snedecor (Hackensack): The thought of coordinating the physiotherapy department so that it is available and of service to every phase of hospital work is my main purpose in presenting this paper to you.

As for teaching physicians; take a man from general practice and you cannot always get him to go out and take a course in physiotherapy. There are lots of new things that have come up since he started to practice medicine and he hasn't taken a course to find out about every one of them. However, there is a great opportunity in your local therapy department to show him.

In addition to these clinics of mine, which the Doctor mentioned, I also make rounds and talk with the staff, suggesting where and how we might help a case with physical measures, or ask for some stubborn condition they haven't been able to control to let me see what I can do with it. There is where you can educate them to a great degree. In addition to that, our department is always open for inspection and there is a constant stream of physicians coming in and out, seeing what we do, what cases are being treated, and thus they are constantly being educated. If they will take special courses, so much the better, but for the general man, he will find a great deal in the hospital physical therapy department.

As for your technicians, I believe that no one can deny a combination of a technician plus the training of a graduate nurse is better than that of a technician alone. I think the first assistant or the chief technician of every department should not only have the technician's training, but also a registered nurse's training. If you want that type of girl, Dr. Stewart is training some.

ULTRAVIOLET RAYS IN THE TREATMENT OF EAR, NOSE AND THROAT CONDITIONS

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Newark, N. J.

(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 7, 1928)

During the past few years the subject of ultraviolet therapy has been of vital interest to the medical profession, and even the laity has, through the medium of the medical press, magazines and newspapers, become educated to the curative powers and the value of ultraviolet radiations in disease. It will be impossible in such a short time allotted to delve deeply into the fundamental principles and scientific study of ultraviolet rays, but for the purpose of this paper we can say that scientific research and clinical experience have shown that ultraviolet radiation is a potent chemical and bactericidal agent, and may thus prove to be a valuable aid in medicine.

The general uses of ultraviolet radiations are many, as the following brief classification shows: direct germicide; indirect germicide; counterirritant; means of producing increased resistance to infection; to depress or to stimulate metabolism; to stimulate the sympathetic nervous system; to regulate mineral metabolism—calcium, magnesium, and phosphorus; to balance endocrine secretions; to overcome disturbances caused by vitamin deficiency, and as a decided analgesic. This enumeration indicates the wide range of conditions that may be benefited by the proper use of this new agency in medicine and surgery. Discussion of such uses based on the above classification is purposely omitted, since this paper is presented only for the purpose of arousing interest in the value of ultraviolet radiation in ear, nose and throat diseases.

The sources of ultraviolet radiation are natural and artificial sunlight, the mercury arc in quartz lamp, and the carbon arc lamps. Nature's source of ultraviolet radiation has the disadvantage of being a variable factor and, for therapeutic purposes, its value de-

depends on the season of the year, time of day, altitude and atmospheric conditions. An effective substitute for sunlight, which will be always available, can be found in the air and water cooled mercury arc in quartz lamps and the carbon arc lamps. A brief reference to the character of light emissions from these artificial sources of ultraviolet radiation would not be amiss at this time. Carbon arc lamps give off a spectrum consisting of many lines, forming what is known as a continuous and combined spectrum. This spectrum is fairly rich in ultraviolet rays, includes all the visible rays, and has a preponderance of red and infra-red rays. The spectrum of the mercury arc in quartz consists of a line spectrum with a preponderance of long and short ultraviolet rays, thus emitting the vital or selective chemical rays of the solar spectrum; in other words, the radiation is confined to the effective therapeutic ultra-violet zone, without the visible and the infra-red zones. The actinic rays used by us in the treatment of ear, nose and throat conditions have been furnished by the air and water cooled quartz mercury lamps; the former for general body radiations, and the latter for local and focal radiations, made possible by quartz rods of various shapes and sizes to work within the auditory canal, nasal fossa, mouth and throat. The quartz tubes used are tipped with a solid quartz condensing lens, for intensifying radiations of the tonsils and pharynx; a similar one, only periscoped, to direct the rays at right angles; and a large flat or rounded condenser for intensive radiation of external surfaces about the face, throat and neck for relief of local inflammation and cervical adenitis. In order to convey an adequate idea of the potency of ultraviolet radiation from the water cooled lamp, it should be mentioned that a 1 minute exposure with the quartz lens in contact with the skin will produce an artificial "sun burn", erythema solare, with redness, soreness, peeling and tanning in sequence, while the lens itself remains cold during the exposure and the patient feels no sensation whatever.

The chief indication for the use of ultraviolet radiation in the treatment of upper res-

piratory conditions is to combat infections, by sterilization of the parts affected. The therapeutic indications for ear conditions are eczema of the external canal, furunculosis, canal infection—as in the "bather's ear"—and chronic middle ear suppurations. Among nasal conditions ultraviolet rays are indicated in acute coryza, acute or chronic rhinitis—hypertrophic and atrophic types—hay-fever (by no means a curative agent but does relieve the condition by destroying any accompanying infection), acute and subacute antrum disease, and ethmoiditis. Ultraviolet rays are indicated in throat and mouth conditions for relief of nasopharyngitis, Vincent's angina, acute tonsillitis, incipient peritonsillar abscesses, septic throat, ordinary sore throat, the red nodular throat after tonsillectomy and adenoidectomy, and, reports have been made that diphtheria carriers have been benefited (the writer has not had the opportunity to use ultraviolet rays in such cases), and, some cases of pyorrhea alveolaris have been benefited by intensive radiation to the affected gums. Ultraviolet radiation has been found particularly beneficial in the treatment of focal infections about the lymph-nodes in the tonsillar pillars, the infratonsillar nodule, the lingual tonsil, and scattered areas of infection about the surfaces of the upper respiratory tract that carry or harbor infections. In combating the different types of infection about the throat and tonsillar regions ultraviolet radiations may be supplemented with the electrothermic methods, dessication or coagulation. As some of these conditions are not amenable to radical extirpation, the ultraviolet rays seem to adequately fill in the gap between surgical extirpation and medicinal measures. It has been observed in a large number of cases that ultraviolet radiations cause a slight shrinkage of the tonsils in the free, non-submerged type; shrinkage accompanied in most cases by a diminution in the congestion and the cryptic discharge.

It must be borne in mind that penetration of the ultraviolet ray locally applied is limited, according to experiments, to about 2 mm. If penetration was deeper it would be reasonable to assume that exposed areas, and even the

entire tonsil could be destroyed. Since the penetration is limited, sterilization can only be expected to reach this depth of 2 mm. It has been further observed, however, that this is not the sole result from ultraviolet radiation because there is a very definite local stimulation and an increased local metabolism which enhances restoration to normal by raising the resistance of the infected field. The limited extent to which ultraviolet rays will penetrate renders it impossible for radiation to supplant tonsillectomies and other indicated surgical procedures in the treatment of diseased tonsils. But, the speaker maintains that in nonoperative cases, and in those which require but refuse surgery—cases of valvular heart disease and in hemophiliacs—electrodesiccation and ultraviolet radiation are worthy alternatives and should be employed without bias or prejudice. It is my practice always to supplement the local and focal ultraviolet radiations to the nose and throat by general tonic ultraviolet rays to the torso, from the air cooled lamps, to build up systemic resistance which is usually low in individuals suffering from ear, nose and throat infections.

It must be remembered that ultraviolet rays will not pass through ordinary glass; the pure fused quartz applicators are the best available conductors for ultraviolet energy. It is of importance, also, to exercise extreme care in giving ultraviolet irradiation for these rays may cause a burn of the skin or blister of the mucous membrane. This accident can be avoided by careful standardization of the lamps for the initial treatment and then by gradually increasing the time of exposure, when using the water cooled lamp, and, in case of the air cooled lamp, by varying the distance of the lamp from the part. The reaction on exposed tissues depends upon the type and intensity of the burner and duration of exposure. The series of cases observed and treated with ultraviolet radiations during the past five years, embraced acute nasal infections, nasal accessory sinusitis, hay-fever, nasopharyngitis, acute follicular tonsillitis, incipient peritonsillar abscesses, Vincent's angina of the gums and throat, pyorrhea alveolaris and tuberculous ulcerations of the buc-

cal cavity. Some of these patients were not treated by the ultraviolet rays alone but received other supplementary treatment.

TECHNIC OF APPLICATION

In acute nasal infections, a nasal quartz applicator, attached to a water cooled lamp, is inserted gently as far back into the nasal cavity as possible, and is then withdrawn slowly to permit of fractional irradiation to the entire mucosa; because all the effective rays are emitted at the tip of the quartz rod. The applicator should not be pressed heavily against the nasal membranes but allowed to lie gently upon the affected parts. This procedure will sometimes cause sneezing, when there is excessive irritation and congestion, but this can be obviated by swabbing the nasal cavities with a 2% solution of novocain. Recently it has been my practice, in some cases, to swab the nasal cavities and throat with a 2% solution of mercurochrome, because in addition to its antiseptic effect it increases the potency of the ultraviolet radiation. In complicating sinus disease, the applicator is inserted so that the tip approaches the affected sinus opening, a special curved applicator being advantageous for this purpose. It is unreasonable to assume that the ultraviolet rays applied intranasally will reach sinus disease; this can not occur unless the sinus mucosa is directly exposed or unless the applicator is inserted into the sinus cavity. However, the auxiliary use of ultraviolet rays within the nasal cavities clears up localized infections resulting from the sinus, and, in primary nasal infections, prevents spread of infection to the sinus mucosa. The duration of treatment at first should be 1 minute and this can be increased $\frac{1}{2}$ to 1 minute, depending on reaction, at each subsequent treatment up to 8 or 10 minutes of exposure. Treatments should at first be repeated daily, then on alternate days, and later as symptoms require. The application should be accurately timed by interval time clocks to avoid blistering of the mucous membranes. In nasopharyngitis and pharyngitis, the posterior nares and nasopharynx are to be thoroughly rayed, using a curved quartz rod designed for

this purpose, beginning at 2 minutes duration and increased $\frac{1}{2}$ to 1 minute, depending on existing pathology, up to 5 minutes duration. The treatment should be repeated on alternate days until maximum improvement is obtained. This application may start coughing or gagging, which can be obviated by applying topically a 2% solution of novocain to the uvula and nasopharyngeal wall. In acute tonsillitis and peritonsillar infections the Baldwin and Plank type quartz applicators on a water cooled lamp are directed for 2 or 3 minutes to each tonsil, and exposure increased 1 minute at each subsequent treatment until infection is aborted or symptoms are relieved. These radiations are supplemented by applications to each side of the throat, over the tonsillar glands below the angle of the jaw, with a flat lens quartz applicator under compression on a water cooled lamp for 2 or 3 minutes depending on the texture of the skin. Reaction should be at least a well defined second degree erythema; the counter irritant effect causes absorption, diminishes swelling and soreness, and relieves the pain. The same technic is successfully used in the treatment of tuberculous cervical adenitis and tuberculous lesions of the throat when accessible. Incipient peritonsillar abscesses can be aborted by 1 or 2 exposures if given before the actual formation of encapsulated pus.

In the treatment of hay-fever, the ultraviolet rays have some therapeutic and prophylactic value when applied locally to the nose and throat and generally to the body; those that have a calcium deficiency usually respond promptly. The technic used in hay-fever cases is as follows: intranasal ultraviolet with nasal quartz rod for 2 minutes duration; postnasal for 2 minutes with a special curvical quartz rod; 2 minutes to the throat with the pharyngeal quartz applicator, and a body radiation at 30 in. distances for 5 minutes. The local radiations are increased 1 minute at each subsequent treatment up to 7 minutes, and the general treatment 2 minutes up to 15 minutes, the lamp remaining constantly at 30 in. distance. Treatments during the actual attack of hay-fever should be repeated on alternate days, whereas prior

to an attack or the appearance of symptoms treatments should be given every third day beginning at least 3 weeks before expected onset of symptoms. Ultraviolet ray exposures will shorten, favorably modify, and often abort the distressing symptoms in some patients suffering from seasonal attacks of hay-fever.

In the treatment of infections of the ears, the ultraviolet rays are given with a pencil-shaped quartz rod inserted well into the canal against the drum, or directly against the lesion in the canal, beginning with a 1 minute exposure and increasing one-half minute at each subsequent treatment until they are of 5 minutes duration. All cavities and lesions should be cleaned with a mild antiseptic, so as to be free of discharge and débris, before ultraviolet radiations are given. In chronic discharging ears, from middle ear infection, the ultraviolet radiation should be preceded by radiant light exposures.

In the treatment of pyorrhea alveolaris, a set of 3 quartz rods, one straight, and the others curved at angles of 45° and 90° , respectively, are used attached to a water cooled lamp. The gums should be rayed, front and back and at the side of the affected teeth, using the several quartz rods in succession, beginning at 2 minutes duration, increasing 1 minute until a third degree reaction is obtained. It is essential that the reaction be to the point that the gum becomes actually sore, for a real destructive effect should be aimed for to relieve pyorrhea conditions. The treatments should be repeated, after the reaction subsides, about every third day. The reaction doses, or fourth degree erythema, produced by the ultraviolet given through the quartz rods under compression cause a destruction of the spongy, unhealthy appearing, receding gum tissues and stimulate the gums to tighten and become healthy in appearance. This treatment requires considerable time and patience but results can be obtained in most cases and it must be remembered that the teeth should be thoroughly scaled before the ultraviolet rays are administered in order to derive maximum benefit in the minimum of time.

In the treatment of Vincent's angina, the affected areas of the mouth and throat are rayed with the different size quartz rods, depending on the extent and location of the lesion; commencing at 2 minutes and increasing 1 minute for each application until a definite reaction or fourth degree erythema is obtained and smears from the lesions are free of organisms. This treatment also requires time and patience with laboratory tests for check-up after every third treatment. The dosage to be effective must be continued to the point of actual destruction of tissue in order to sterilize this stubborn and more or less persistent type of infection.

In the treatment of tuberculous ulcerations of the tongue, mouth and throat, different sized flat surface quartz lenses are used, depending on the size of the lesion, attached to a water cooled lamp, beginning at 2 minutes exposure, increasing 1 minute up to 5 minute treatments, which are to be repeated on alternate days until the local lesion heals. This local radiation is successful only when given in conjunction with general body ultraviolet radiations, good food, rest and perfect hygienic conditions.

The ultraviolet radiations have recently been used to modify medicinal plant and animal products, so it is possible that they may be utilized as a second hand or indirect agent in medicine, but is not likely that the direct use of ultraviolet radiation will ever be discontinued.

A tolerance to ultraviolet ray may be developed in the mucous membrane, as in the skin, and too many exposures should be avoided.

Employment of ultraviolet radiation in ear, nose and throat conditions does not interfere with the use of other physical forms of treatment and other indicated medicinal and surgical procedures.

CONCLUSIONS

(1) The ultraviolet rays properly applied to tissues, have proved to be an effective germicide and a decided aid in the treatment of ear, nose and throat conditions.

(2) A carefully systematized technic of

application must be employed to derive maximum benefit.

(3) Ultraviolet radiations must be employed with care and only by one acquainted with the physical action of such therapy on the tissues.

(4) Ultraviolet ray therapy locally and generally applied to the body, via the modern mercury vapor and carbon arc lamps, is an important addition to our treatment armamentarium.

SPREADING ULCER OF THE CORNEA

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(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 8, 1928)

In the whole domain of ophthalmology there are only a few diseases that rapidly destroy sight, and one of these is the spreading ulcer of the cornea. (I am using the term "Spreading ulcer" advisedly in order to avoid the terms "serpent ulcer" and "hypopyon keratitis". "Serpent ulcer" is used by some interchangeably with "serpiginous ulcer"—an entirely different disease—and hence confusing. The term hypopyon keratitis is an incorrect one to use when there is no hypopyon present.) In all other diseases that may cause blindness we have time to try various remedies for a number of days or even weeks, but with the spreading ulcer quick judgment and effective measures are prerequisite to success in preventing blindness. We have heard and read a great deal about such other diseases as glaucoma and retinal detachment, but in regard to the spreading ulcer there seems to be silence and paucity of literature. The reason may be that the results obtained do not justify much talking or writing. Yet, using discouraging results as stepping stones, we may expect to reach the goal of success. My reason for presenting the subject is to stimulate discussion and to exchange ideas about this destructive disease.

These ulcers, leaving out those caused by

diseases like small-pox, scarlet fever and measles, are sometimes caused by such an insignificant traumatism as brushing of a leaf or scratching of a finger nail, or by a severe traumatism like a piece of stone striking the eye. The pneumococcus is the infecting organism in a great majority of instances.

After a trauma there is sometimes very little discomfort felt; only slight lacrimation and photophobia. This feature of the disease makes it more treacherous, as it causes loss of valuable time. However, sooner or later severe pain sets in and compels the patient to seek relief. The stage in which we find the ulcer depends in a great measure on how early the pain started. We may find a pin-point ulcer or an extensive lesion with edges undetermined, center bulging or already ruptured. In whatever stage we find it there usually is cloudiness in the surrounding cornea. In very virulent cases a pin-point ulcer may in 24 hours practically cover the whole cornea. This speedy development of the disease makes it imperative that every lesion suspiciously like ulcer shall be seen frequently and at close intervals, and at each visit the site of the ulcer, together with its diameter, should be plotted on the patient's chart in order to make comparisons at the next visit.

Treatment: Several years ago when ethyl-hydrocuprein hydrochloride, commonly known by the name of optochin, was discovered we thought that we had in it a specific for all pneumococcic infections. Unfortunately, experience with it has cooled off our enthusiasm for it. While it may, like other antiseptics, such as mercurochrome, metaphen, zinc sulphate, eventually control the infection (not to mention the sloughing it occasionally causes) it cannot be depended upon for promptness of action. And this is not surprising, because, while the antiseptic may be efficient enough to kill the bacteria *in vitro*, it cannot reach those imbedded in the substance of the cornea; therefore, it is inefficient until the slough is thrown off and the bacteria are exposed to its action. However, by the time this takes place the ulcer may have spread all over the cornea. In my experience,

Prince's pasteurizing treatment has the same drawback, namely, it is too slow to check spreading of the ulcer.

Reports about Shahan's⁽¹⁾ thermophore treatment, though meager, have been encouraging. In 1917, Shahan reported a series of 32 cases successfully treated, and in 1926 Phinney⁽²⁾ reported 3 cases, 2 of which were successful but the third case must be considered a failure as it took 3 applications and more than 2 weeks time to check the ulcer. I have had no personal experience with the thermophore. The method which I have been using since 1918 having been satisfactory, I did not wish to change.

After some modifications the procedure I have adopted is as follows: On seeing a suspicious case of corneal ulcer the site and diameter of the ulcer is plotted on the patient's chart. Depending on the site of the ulcer, the patient is seen at intervals of 8-12 hours; the closer the ulcer to the center of the cornea the shorter the interval. If the surrounding cornea is cloudy I cauterize the ulcer with pure carbolic acid, regardless of absence of hypopyon. I always anticipate a spreading ulcer if the history shows that a piece of stone has been the cause of the injury. I prescribe 1% mercurochrome every 2 hours and atropin. At the end of 8-12 hours the patient is seen again and if the ulcer is found to be threatening the center of the cornea, the ulcer bed is cauterized without further delay using the flat side of an electric knife cautery and the cornea is punctured with the cautery-needle that I devised, Fig. 1. The



Fig. 1—Yazujian's cautery needle. Note that the point is a single wire extending 4 mm. beyond the twisted double end.

puncture is always made within the ulcer bed and in the pupillary area if feasible, in order to avoid anterior synechia. The cautery-needle should be heated to bright cherry-red, and as soon as the anterior chamber is entered, which fact is announced by a spurt of aqueous humor, the thumb is taken off the cautery button and the needle withdrawn. The aqueous humor cools off the point of the

needle, and with ordinary care and promptness no injury is done to the underlying structures. During the operation the eye should be kept open by a speculum, the eyeball steadied with fixation forceps, and the arm of the operator held firmly against his side with hand resting on patient's face in order to insure steadiness and perfect control. At completion of the operation atropin is instilled, a bland ointment applied, and the eye bandaged with gauze and adhesive. The patient is kept in bed for a couple of days. On the day following operation, when the bandage is removed, the spread of the ulcer will be found checked, and on the second day regression will be noted. Thereafter, appropriate treatment for a regressive ulcer is instituted.

I wish to report the following cases which are taken at random from my private files, in their chronologic order:

Case 1. H. Y., aged 62, consulted me November 5, 1918. Three days before, while working in a stone quarry, a piece of stone struck the right eye. Did not have any discomfort till next day. Eyeball congested. Round ulcer 3 mm. in diameter, in center of the cornea. Some hypopyon. Posterior synechia at "11 o'clock". Nov. 7 (had not reported yesterday as ordered); ulcer spreading; more hypopyon; ulcer touched with iodine. Nov. 8, ulcer has spread more; cauterized with pure carbolic. Nov. 11, no improvement; under cocaine anesthesia ulcer bed cauterized and cornea punctured. Nov. 12, hypopyon has disappeared and progress of the ulcer has stopped. Nov. 13, treatment for regressive ulcer instituted. Result—Feb. 13, 1919, object perception.

This was the first case in which I resorted to cautery puncture, after some hesitation, making use of the well-known fact that decrease of intra-ocular tension brings about regression in corneal ulcers. Before, in other cases, I had cauterized the ulcer bed without puncturing the cornea but the results were not satisfactory.

Case 2. J. J. W., aged 37, consulted me on Dec. 5, 1921. Three days previously, while corking a boiler, mud and rust struck both

eyes. Had no discomfort till yesterday when he consulted his doctor who referred him to me. Vision, R. 22/100, L. 20/20. A round ulcer 2 mm. in diameter beginning at inferior pupillary margin and extending toward the limbus; ulcer surrounded by an areola of steamy cornea 2 mm. wide; pupil contracted; conjunctiva swollen and congested. Ulcer touched with 2% optochin. Same day, at 7 p. m., ulcer measure 3 mm. in diameter; some hypopyon; touched with iodine. Dec. 6, ulcer has spread another millimeter; edges undermined. Cornea punctured with cautery-needle. Dec. 7, progress of the ulcer arrested. Dec. 10, ulcer looks clean. Feb. 8, 1922, cornea recovered; some ciliary irritation due to a fine anterior synechia which was incised with a discission needle. April 3, vision—fingers at 6 feet.

Case 3. J. Q., aged 49, consulted me Nov. 23, 1923. Two days before while hammering stone, a piece struck the left eye. Vision—21/100? A round ulcer 2 mm. in diameter, beginning at the inferior margin of the pupil and extending toward the limbus; cornea steamy around the ulcer. Prescribed 1% optochin. Nov. 24, ulcer has spread further. Cornea punctured with cautery-needle. Nov. 26, ulcer regressive. Jan. 18, 1924, vision with 2D. crossed cylinders 20/100.

Case 4. J. E. C., aged 34. First seen Sept. 16, 1924. "Yesterday a piece of stone struck the left eye". Vision—fingers at 10 ft. An ulcer 2 mm. in diameter in the center of the cornea; some hypopyon; eyeball markedly congested. Ulcer touched with iodine, 1% mercurochrome instilled, and 1% optochin prescribed. Sept. 18, ulcer has kept on spreading. Cornea punctured with cautery-needle. Sept. 20, ulcer regressive. Jan. 27, 1925, vision—fingers at 1 ft.

Case 5. T. E. G., aged 41, seen July 2, 1927. Four days previously, while tamping ties, a stone struck right eye. Vision 20/20. Round ulcer 2 mm. in diameter near the corneal limbus at "7 o'clock". Mercurochrome 1% instilled. July 7, cloud around the ulcer; nasal edge undermined. Touched with pure carbolic and prescribed 1% mercurochrome. July 8, cloudiness spreading; cornea

punctured with cautery-needle. July 10, ulcer regressive. Sept. 20, vision 20/25; with .25 cy. ax. 75°, was—20/20.

Case 6. A. M., aged 38 years old, came in Sept. 12, 1927. "Three days ago piece of stone struck the right eye. Next day a doctor removed the foreign body. Since then the eye has been painful." Small ulcer at the lower margin of a contracted pupil; 2% mercurochrome instilled and prescribed. Sept. 13, ulcer spreading; edges undermined; whole cornea steamy. Cornea punctured with cautery-needle. Sept. 14, whole cornea dead-white, except a narrow crescent above; no spreading of the ulcer. Sept. 15, whole cornea white; ulcer sloughing. Prescribed 1% optochin every hour. Sept. 16, 2% optochin instilled and 2 c.c. of milk injected hypodermically. Sept. 21, sloughing continues, cornea bulging; 3 c.c. of milk hypodermically. Patient discontinued treatments.

Case 7. J. T., aged 26 years. Consulted me at 10 a. m., May 26, 1928. "Yesterday while drilling, a chip of steel struck the right eye. A doctor removed the foreign body. Today the eye is painful." Ulcer 1 mm. in diameter at "5 o'clock", at the margin of a contracted pupil and surrounded by an areola of cloudy cornea. Mercurochrome and atropin instilled. In the afternoon patient was seen again. Pain severe but no spread in ulcer. Prescribed atropin and 1% optochin every 2 hours. May 27, 10 a. m., ulcer covering 2/3 of the cornea on nasal side; ulcer bed cauterized and cornea punctured with cautery-needle. May 28, no further spreading. May 30, regression beginning. He is now under treatment for regressive ulcer.

COMMENTS

(1) Five out of the 7 cases of spreading ulcer of the cornea resulted from stone injuries.

(2) Hypopyon was absent in more than 50% of the cases.

(3) In 6 of these cases the ulcer began practically in the center of the cornea, reducing the vision considerably. Prevention of ulcer spreading in such cases has for its chief aim preservation of a wide area of clear

cornea for a future iridectomy, not to mention ending of the patient's suffering.

(4) Where the ulcer was away from the center (case 5) patient had practically normal vision after recovery.

(5) None of the antiseptics showed any potency to check the ulcer.

(6) Cautery puncture promptly checked spread of the ulcer in all except one case which was a fulminating one from the beginning.

(7) Complications, such as hernia of the iris, luxation of the lens, or intra-ocular hemorrhage, was not encountered in any of these cases; perhaps due to minute size of the puncture not allowing the aqueous to pour out suddenly as it does in the case of spontaneous perforation or as during a Saemisch incision.

(8) It should be borne in mind that this is a radical measure for a destructive disease and should not be used in nonspreading ulcers of the cornea.

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DISCUSSION

Dr. Albert Pilkington (Atlantic City): The question of an ulcer spreading is, of course, very interesting. A "pneumococcus ulcer" I think is a very much better term than "spreading ulcer" or "hypopyon ulcer", and when one sees the hazy edge undermining the cornea, the first thing to do is to take a smear. I take a smear from every ulcer that looks suspicious and settle the question very quickly as to whether it is a pneumococcus infection. The moment one sees a pneumococcus ulcer the treatment must be active, continuous and severe. I treat all my pneumococcus ulcer cases myself. I do not rely upon nurses or residents in the hospital for treating pneumococcus ulcers at all. I believe in very active treatment and that treatment of the right kind will give results; whereas, if it is allowed to pass along from day to day with only 2 observations or 2 treatments of an active type a day, the ulcer is going to progress.

With regard to optochin, I do not think that 1% optochin solution dropped into the conjunctival sac is of much value. I prefer to anesthetize the cornea and apply optochin on the end of a small probe for 1 to 1½ minutes, long enough for the optochin to get into the soft tissue of the ulcer; though I instill the 1% optochin every 2 or 3 hours because it is the recognized treatment. If the ulcer is not spreading very fast, carbolic acid may be of value. I do not see much value in carbolic acid and rely practically entirely on actual cautery. I do not hesitate to take the Prince's bulb

and cauterize the edge of the ulcer very, very quickly.

On perforation, I think if you can take a pneumococcal ulcer in which the original trauma was not deep into the interstitial tissue, you can get recovery, with active cauterization and active antiseptic treatment, without perforation. It is when the floor of the ulcer shows signs of bulging that we are told to perforate it, but there is always a great loss of vision after perforation. When the scar heals up, even if it should not be in the center of the cornea, even if it should be well down into the limbus, you are certainly going to have a large amount of distortion of corneal curvature. If we can get along without perforation of the cornea we have a much better visual result.

One reason why I believe in early and active cauterization is that you are less apt to get an iritis, especially if the case is not seen early, which does not respond to atropin. I have found in an iris which is too swollen and does not respond to atropin, that I probably do better by using a gelatine disk than I do by aqueous solution or by an ointment. Speaking of ointment brings up a question with regard to all ulcers, and that is if you can prevent your patient from moving the eye under the lid or rubbing the lid over the eye, and thereby removing the new cells as they tend to cover in your ulcer, you can get quicker results and better visual results, because the more often the patient rubs off the new cells and the longer the tears lay in contact with the exposed cornea, the denser will be the opacity, and I pay very strict attention to that.

The first thing I do is to put a cold compress on both eyes, merely to keep movement of the good eye from moving the injured eye, and then I try as far as possible to make the injured eye comfortable, not hesitating to use a holocain ointment for that purpose. In a pneumococcus ulcer I use mercurochrome to show the speed of tension or the depth of the injured area. I use the mercurochrome at every dressing so as to show me what the effect of the previous treatment has been and whether the ulcer is progressing. As to its value in treatment, I am doubtful.

There is one treatment that has been of great value to me, and that is the mixture of scarlet-red and methylene-blue. I very frequently alternate with a plain scarlet-red ointment and a mixture of the scarlet-red and the methylene-blue ointment. I rely upon the ointments a great deal, and I am speaking at this time to try to encourage the attention of this Section to those things which the ophthalmologist meets most often and the points which are of value to him, which I would like to see pushed forward in our yearly Section meetings, as well as the unusual thing, which of course we are always glad to know about.

Dr. W. Blake Gibb (Morristown): I am glad the speaker has noted the action of stone as causing these ulcers. In the last 3 cases I have had, all have been due to stone injuries of the cornea and nearly all were in the center of the cornea. About treatment, I do not depend upon carbolic acid. I think that nothing reaches the diseased tissue as well as the actual cautery. After cauterizing, at the next dressing, I use a 5% solution of optochin, applied only where the ulcer was cauterized. I get very good results with this method and it is very seldom that I ever have to incise an ulcer.

I do not use mercurochrome in these cases; depending more upon atropin ointment. I feel that

the ointments are very soothing where there is intense irritation.

Dr. D. F. Remer (Mount Holly): The only cases I have had in a very short practice in eye work have been rather unusual. They have not been the stone injuries. Most of my industrial injuries have been from metal. I see a great many illiterate foreigners working in iron foundries. In picking up the scrap metal from a shovel, a small piece will fly into the eye. It gives the same eye injury as does stone, with one difference; the patient, in the majority of the metal injuries, is able to see or realize that the piece of metal is flying toward his eye, and in practically all of these cases there will be a small, white scar formed on the edge of the lid and the foreign body has not come in contact with the cornea but has struck the lid, the injury has been spread out by a more forceful blow than a direct blow on the surface of the cornea.

In addition to those same injuries are those which come from the flying of hot metal from a ladle, in which a drop of very hot metal will fly into the eye and will give much the same type of injury as this ulcer, with this difference; a small drop of hot metal flying on the cornea will give you identically the same thing that you do with your cautery. It is red hot when it strikes there, and in many cases I have lifted the lid and extracted a small piece of metal. The ulcer is there immediately. The base is cauterized with the red hot metal. The ulcer will disappear in a very short time, proving the effective use of your cautery immediately.

One thing that I have found very advantageous, to combat the iritis is to get these cases immediately, if possible, and use atropin powder. I immediately get my dilatation and I don't need to wait any length of time for it. I don't cauterize with carbolic acid, but if the ulcer is spreading, on the second day I immediately cauterize it.

Dr. Willard G. Mengel (Camden): I was hoping that the doctor would touch upon the discussion of dendritic ulcer, more appropriately known as dendritic keratitis, which is a neurotrophic disturbance, but not much was said about it.

Briefly, I might add to the treatment of the so-called pneumococcal ulcer by saying that we have found it very efficacious in those cases seen in the early stage, before actual cauterization becomes necessary, to use the thermophore; that is, to use a hot direct application to the ulcer just short of cauterization. Use it in those cases, which have not gone on to the real disturbing stage, where considerable scarring results. If a thermophore is used, sufficient reaction results to hasten a cure, and considerably less scarring is the ultimate result. Another therapeutic measure is the intramuscular injection of a foreign protein. We find a general reaction and also a local reaction and a degree of temperature very beneficial. Paracentesis is an excellent measure. The doctor uses a cautery to effect the paracentesis of nature. We all know that the paracentesis is at once beneficial and causes the ulcer to heal.

Dr. Linn Emerson (Orange): What Dr. Remer has said relative to eyes burned with metal, I think we can all corroborate in the curling iron burns. You have no doubt all seen curling iron burns. I have seen from 3 to 7 a year. I have never seen any that didn't heal in 3 or 4 days at the most. The patient comes in with severe pain, lacrimation and photophobia and is sure she has put her eye out. I always assure the patient that she will be well in 3 or 4 days, and sure

enough she is. That type of burn will heal most readily.

I shall never forget when I learned the value of the perforation of the cornea by cautery. About 25 years ago I took the fine tip of the cautery to perforate the cornea and not realizing how deep the ulcer was, I very deeply perforated the eye. I got an aqueous squirting from the eye; the patient jumped and cried out, and I had a very uncomfortable 24 hours because in the first place I was afraid I had hit the lens. I was very much astonished to find the next morning that his anterior chamber had reformed and he was markedly improved and went on to a very rapid recovery. I then read the literature and learned that the procedure was a good one, and I have had occasion to do it a great many times since, but it was by accident that I learned its value.

I have 2 favorite atropin prescriptions; one is plain atropin and the other is a combination of atropin and dionin. In all cases of inflammatory eye disease in which there is corneal involvement, I use a combination of the atropin and dionin, which has a very decided and distinct analgesic effect. Some of my patients would have to have morphin at night if I didn't use that. I tell them that if they go to bed and sleep, and then in 2 or 3 hours they are awakened by pain, if they will get up and put their drops in again they will be able to go to sleep again. If they do that, they don't have to have a sedative. I think very highly of the use of dionin combined with atropin. The other medication which has been mentioned is also in routine use so far as my patients are concerned.

Dr. D. M. Yazujian (Closing discussion): I must thank the Section for discussing this paper so freely. It has brought out several useful points.

Of course, we know that in most of the cases pneumococcus causes the ulcer, but according to DeSchweinitz the infecting organism is not always pneumococcus.

I have been rather fearful of optochin on account of the reports that it caused sloughing of the cornea. I don't know whether the results in Case No. 6 in my report were not due to optochin because the patient was using a 1% solution of it every 2 hours.

As to hot metal, of course we have nothing to fear when it strikes the eye because it is sterile. Same is true about the curling iron. It may cause an ulcer but it will be a sterile ulcer which is easy to control.

I must again emphasize the fact that in puncturing I do no more damage to the cornea than there already exists, because the puncture is made within the ulcer bed itself. As Dr. Emerson mentioned, when you see the aqueous squirting from the eye you will think some damage has been done, but if you are prompt enough there will be no damage whatever, and in the cases that I reported there was no cataract. In 1 case there was a very fine synechia to the cornea, which I easily clipped with a pair of scissors. That is the only complication I have seen.

I use both atropin and dionin powder as a routine, but I use them separately. If you use dionin and immediately put the atropin in, the dionin will cause so much laceration that it will wash out the atropin. So I wait about 5 or 10 minutes until the laceration has stopped and then put the atropin in, and it is more effective.

Chairman Emerson: Who makes the cautery tip which you showed, Doctor?

Dr. Yazujian: V. Mueller, of Chicago.

OUR ANNUAL WINTER INFECTIONS OF THE RESPIRATORY TRACT IN CHILDHOOD

ARTHUR STERN, M. D.,

Elizabeth, N. J.

(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 8, 1928)

To those of us who have practiced medicine since the beginning of the century and have devoted interest and time to the diseases of childhood, it must have become apparent that morbidity and mortality in childhood have undergone a great change, and where formerly the greatest danger lurked in summertime, it has become significant that there has been an annual winter increase in morbidity, growing constantly and apparently without any check up to the present time. It is with somewhat pessimistic feelings that I present these remarks to you, having in mind the great economic disturbances which these diseases bring to parents and the damage which is brought to the child either directly or indirectly in the course of these miserable infections. The question naturally arises and divides itself into 2 parts—first, what can we do prophylactically to prevent the spread, and, secondly, how can we deal with them when they have attacked the child. If we analyze how we conquered infections of the intestinal tract in summertime, we must state, without detracting in the least from the marvellous work which has been done in the past, that this was a comparatively easy matter because prevention of these infections reduced itself to the task of teaching the mother to become hygienically clean in her dealings with the child. Breast-feeding, improved milk conditions, and supervision of the child in health stations, have produced the results which we expected from them. But the prevention of winter infections is quite a different matter. Of course, there has been a great deal written on this subject, but has it developed into anything tangible, something which we can use intelligently, or something that will stand the test and will reduce the ever-increasing number

of these infections with their manifold complications, of which I shall speak later on? Sobel, in a recent paper on the prevention and control of respiratory diseases in the young, states that one-fifth of all deaths under 1 year, and one-fourth to one-third of all deaths in children under 5 years of age are chargeable to diseases of the respiratory tract, and he does not fail to mention that our means at hand for the prevention of respiratory diseases are neither so immediate nor so direct as in the case of diarrheal diseases.

We have heard it mentioned so often that it should be impressed on the public: that so-called colds are contagious; that, in families, children with symptoms of colds should be separated from others and should not be sent to school; that mothers with colds should not kiss their children, or as one writer puts it, that mothers with colds should wear gauze masks when taking care of their children. While we know that the basis of these calculations is common sense, yet, we are at the same time convinced that it is absolutely impossible to obey these orders intelligently. How can a mother take care of her children, prepare the food, give orders over the telephone, and be comfortable, while at the same time wearing a gauze mask for 24 hours? And as it happens frequently, the whole family becomes infected within 24 to 48 hours, showing the futility of all our hygienic measures. On the other hand, have we not all observed that the maximum morbidity is not always among the poorer classes; far from it, in my own practice, which brings me in contact with all kinds of people, I find just as much among the families where every attention and care is given to the children by their parents. And not infrequent is the exclamation of the mother: "I do not understand why my child, with all the care I give it, has to get these terrible colds every winter, and it takes me all summer to build up the child and repair the damage which the winter months have caused." It seems, after all, that we meet here biologic questions of immunity which are still far from their solution, for the simple reason that no scientific observations are possible at the present time because the

formerly absolutely healthy patient comes in contact with his physician after the infection takes place, and there is, as a rule, very little hospitalization. The rapid ways of transmission are unknown, and the duration of a great many infections are too short to permit of scientific work. In a paper read before the American Public Health Association in 1927, on "Pneumonia Quarantine", by Benz, of Pittsburg, attention is called to the results which have been obtained there by the reporting and quarantining of this disease and, aside from reporting, quarantining and rousing public interest, it is recommended that there should be an organized study in centers of population as to all the factors, causation and control of pneumonia, by a pneumonia commission with funds sufficient for a study over years and collaboration with similar commissions in other centers.

As these remarks represent my humble personal ideas, I cannot help stating from experience that those children who have been exposed to fresh air since birth, the so-called fresh air children, are far less susceptible to these infections than the hot house plants in families where the mother waits daily with a different weather excuse to keep the child indoors. This may be the reason why children of the poorer classes do not fare so badly in wintertime. I have not been able to convince myself that early operative measures have any influence, by which I mean early removal of tonsils and adenoid tissue, although there are instances where, during the course of the infection, it might in many cases be of great benefit. Occasionally, I receive the impression that instillations of a 25% adrenalin solution 1:1000 at hourly intervals, has prevented a long duration of the infection, comparing these children with others in the same family, where I saw them at a later stage of the disease. So, you see that there is very little at the present time to be done from a prophylactic standpoint.

As far as diagnosis, prognosis and treatment are concerned, I feel that we may be somewhat optimistic although a return to normal after an attack does not prevent the child from getting relapses; indeed, it seems almost

characteristic of these infections that they relapse frequently, as I have been in many families where the same story repeated itself, especially this last winter since December, month after month, and in speaking of infections of the respiratory tract, we mean this with all accompanying complicating disturbances in the ears, antrums, glands of the neck, which come up during the course of the disease with ever changing form and frequency. Furthermore, it seems that the character of the disease appears every year in a different light and complications which formerly were rare are now of every day occurrence; for instance, retropharyngeal abscesses, a rarity when I started to practice medicine, are now observed in considerable number.

Finkelstein thinks that in many cases the relapses of grippe are due to a constitutional exudative diathesis which exists from birth. He thinks that in normal children the first infection heals without trouble, while, in the latter children the infection acts as a sensibilator, as he calls it, leaving a remaining hypersensitiveness. That is the reason, he says, why so many children do not come to rest after the first disturbance and therefore are infected for weeks and months, either having relapses with normal temperature or having a continuous mild temperature rise for months. I have observed this condition often in several children of the same family, where temperature and cough sometimes exist for months. Roentgenograms of chest are absolutely negative, except for showing occasional swelling of the hilus glands. Finkelstein calls attention to conditions like these in day nurseries, orphan asylums and so on, where the attending physicians fear nothing more than a grippe epidemic. Fresh air and warmer weather seem to him to be the only cure.

The peak of the epidemic seems almost to come at the same time every year. February and March are generally the high months; there is less in April and the course of the disease generally is finished in May. The infection starts generally in 2 ways; either with a rise of temperature and in 24 to 48 hours the first local symptoms present themselves

with a slight cough or a rhinitis and the child complains of a sore throat, or the disease is rushed in immediately with a cough, discharge from the nose and a gradual rise in temperature. In examining the throats of these children, there seems to be almost always a red zone $\frac{1}{4}$ in. broad, on the edge of the soft palate. I do not want to say that this is characteristic of grippe, but it has been observed by me so often that I thought it would be worth mentioning here. Very often at this time the glands of the neck in the neighborhood of the sternocleidomastoid muscle are swollen. Antrum and ear complications do not present themselves early; a week very often passes before the first complaints about the ears are heard. The symptoms in the lungs are well known to us, they vary from a bronchitis to all forms of broncho-pneumonia with complications.

During this last winter I received the impression that we had an unusual number of children suffering from asthmatic bronchitis and I saw also more cervical adenitis than at other times. In fact, it seems that the character of the disease shows us a different face every season. The same holds good for the intestinal complications, or the so-called intestinal grippe, which also accompany these infections.

In this winter epidemic we have had too, a great number of cases of initial croup of the larynx, which sometimes lasted for several days and made the differential diagnosis between pseudocroup and primary diphtheria of the larynx extremely hard. These croups lasted much longer than the average case of pseudocroup, which starts at night and is over in a few hours.

Now, as far as treatment is concerned, it seemed to me that the majority of the cases did much better on early instillation of 25% adrenalin solution 1:1000 at hourly intervals for 24 hours; at least I received the impression that these children did not develop much bronchial disturbance. Cough medicines I have abstained from. I relied more on the salicylates in the average case, especially aspirin, as we know that children tolerate this medication well, and have allowed them nour-

ishment very sparingly at least for a few days. I have observed very little antrum trouble in comparison to the number of cases treated; but a great deal of additional cervical adenitis. Most of the glandular swelling disappeared in the course of the disease but in some cases this did not take place and suppuration followed. In a few cases where the process lasted for weeks and suppuration took a long time to develop, we used some quite heroic measures; that is, we had, even when the process was at its height and the temperature was continuous, the tonsils and adenoids removed and, if necessary, the abscess opened at the same time, and in a few days the whole picture had changed and a child, pale and fretful, keeping parents awake for weeks, had become normal in from 24 to 48 hours. Retropharyngeal abscesses demand early recognition and immediate surgical intervention no matter how sick the child appears to be. The complicating ear disturbances are of great importance, and seem to be not alone a great source of worry to the parents but of far reaching interest to the child. A mastoid operation, if we compare it with an osteomyelitis, is surely not a trifle and should be left to the hands of those who are able to cope with all the emergencies which arrive in this field. A chronic discharging ear and a damage done to the hearing apparatus is a matter of serious consequence at our present age. I consider the ear complication the most serious of all.

Special treatment of the different infections of the bronchial tubes and lung tissue needs a few remarks. I have always used, and found of great value, the fresh air treatment first recommended by Northrup. It seems to me that children treated in this way felt more comfortable and gave me an altogether better impression at my morning visit than those children where the mother insisted on having the windows closed and the room warm. In cases of bronchopneumonia in young children, I always use mustard towels around the chest until the skin becomes red, as recommended by Heubner. These can be applied 3 times a day. Now, there are a number of children who, after they are through

with their lung disturbances, keep on coughing for weeks afterward, much to the despair of the mother, who seriously thinks of a tubercular process following the grippe. A roentgenogram of these children invariably shows a large number of hilus glands, which undoubtedly have become infected during the course of disease and keep up the bronchial irritation for some time. There has been nothing better in my experience than the action of actinic light on the chest and back, starting with 2 minutes and increasing the time every 2 days until the skin becomes tanned. As a rule, in a few weeks the cough stops and the child looks much better.

As you see, what I have brought to you with these remarks is neither new nor much; in fact, that is the disturbing factor in these winter infections, that we have not been able to cope with them prophylactically to any extent worth while. I think, however, that our efforts must bring us some day to a point where we can conquer, as has been done successfully in many other diseases, these forceful destroyers of the health and life of little children. I shall be glad to hear your remarks on this important subject and am in hope that you, in your discussion, may contribute more to it than I have brought out in this weak attempt to deal with a condition which threatens us every coming winter.

DISCUSSION

Dr. Julius Levy (Newark): Referring to *Chart No. 1*, when we contrast the mortality under 1 year of age by months or seasons, we observe that in the 2 year period, 1913-1914, the peak of mortality is found in July and August and that in the later 2 year period, 1926-1927, the peak of the summer months has been entirely flattened out, so that we now have practically a straight line with slight elevations in the winter months, particularly in March.

When we study *Chart No. 2* we find the explanation for the flattening out of this high summer infant mortality. You will notice that the average number of deaths in the 2 year period, 1913-1914, assigned to gastro-intestinal or diarrheal diseases was 295, which was more than $\frac{1}{4}$ of all the deaths under 1 year. For the 2 year period, 1926-1927, the average number of deaths from gastro-intestinal and diarrheal diseases was 86, which is 12.4% of the total number of deaths under 1 year. The average total number of deaths under 1 year in the 2 year period, 1913-1914, was 1,061, while in the 2 year period, 1926-1927, it was 695, a reduction of 34.5%, while during this period the reduction in diarrheal diseases was 70.8%. This shows quite clearly what has caused this remarkable disappearance of the summer peak of infant mor-

CHART 1

DIARRHEAL DISEASES

Total number of deaths under 1 year in 1913	999
Total number of deaths under 1 year in 1914	1122
Average for the 2 years	1061
Total number of deaths under 1 year from diarrheal diseases in 1913	267
Total number of deaths under 1 year from diarrheal diseases in 1914	323
Average for the 2 years	295
Proportion for the 2 years—27.8%	
Average specific death rate for the 2 years—27.2	
Total number of deaths under 1 year in 1926	753
Total number of deaths under 1 year in 1927	636
Average for the 2 years	695
Total number of deaths under 1 year from diarrheal diseases in 1926	102
Total number of deaths under 1 year from diarrheal diseases in 1927	70
Average for the 2 years	86
Proportion for the 2 years—12.4%	
Average specific death rate for the 2 years—8.4	

tality. Now, with the disappearance, practically, of the diarrheal diseases in the first year of life, it is natural that the physician who has practiced prior to and during this period gathered the impression that there is an increase in the incidence of respiratory diseases and that even the mortality from these diseases is higher than it was formerly. A study of the records, however, does not bear out this impression.

From *Chart No. 2* one might, at first glance, find corroboration of this impression. This chart shows the proportion of the total deaths under 1 year due to diarrheal and respiratory diseases in the 2 year periods, 1913-1914 and 1926-1927. One sees that in the first 2 year period the diarrheal diseases represent a much larger proportion of the total deaths under 1 year than the respiratory diseases, while in the later 2 year period the respiratory diseases represent a much larger proportion of the total deaths. Since these deaths from respiratory diseases represent a large number of children sick with bronchitis and pneumonia, one can easily see how this impression that there is a

marked increase in respiratory diseases was gathered. The actual number of deaths from respiratory diseases in the 1913-1914 period was 209, while in the 1926-1927 period it was 182. We have tried also to determine if the respiratory diseases are more fatal to infants at this age than they formerly were. This is rather difficult, as we have no dependable data on the number of respiratory cases and we are unable, therefore, to give a satisfactory fatality rate, but we can form an opinion from the specific death rates for these periods. The specific death rate for diarrheal diseases in the 2 year period, 1913-1914, was 27.2, while in 1926-1927 it was 8.4. The specific death rate for respiratory diseases in the 1913-1914 period was 20.2, while in 1926-1927 it was 17.8.

We come to the conclusion, then, that in the past 15 years there has been no increase in deaths from respiratory diseases in infants under 1 year of age; that there has been a slight reduction in the specific death rate from respiratory diseases, and, that as the outcome of the practical elimination of diarrheal diseases, the peak of summer

CHART 2

RESPIRATORY DISEASES

Total number of deaths under 1 year in 1913	999
Total number of deaths under 1 year in 1914	1122
Average for the 2 years	1061
Total number of deaths under 1 year from respiratory diseases in 1913	182
Total number of deaths under 1 year from respiratory diseases in 1914	236
Average for the 2 years	209
Proportion for the 2 years—19.7%	
Average specific death rate for the 2 years—20.2	
Total number of deaths under 1 year in 1926	753
Total number of deaths under 1 year in 1927	636
Average for the 2 years	695
Total number of deaths under 1 year from respiratory diseases in 1926	260
Total number of deaths under 1 year from respiratory diseases in 1927	104
Average for the 2 years	182
Proportion for the 2 years—26.2%	
Average specific death rate for the 2 years—17.8	

mortality has been flattened out with the result that one in general practice would gather the impression that there was an increase in the amount of respiratory diseases and in the number of deaths resulting.

Dr. F. I. Krauss (Chatham, N. J.): I would like to discuss Dr. Stern's paper from the clinical standpoint. His picture is very discouraging to all of us and yet it is perfectly true. Every one of us is constantly up against the question of the parents. Among the doctors we are discussing—what do you do to treat these cases? On the question of prevention there are certain factors which are not under our control and certain factors which within reason are in our control. The factors which are not under our control are the seasons. We cannot get away from variations in temperature, humidity, sunshine, all of which must play a very large part either in one's individual immunity or in the pathogenicity of these various organisms. Why organisms vary during seasons of the year, none of us know. Whether it is due to the ultraviolet ray in the normal sunshine, or to changes in humidity, certain factors must influence bacteria in their virulence, as well as influence the resistance of the individual. Those things we cannot change.

The factors which are under our control to a certain extent are, first of all the heating of our homes and the amount of humidity in our homes. I think our artificial system of steam heat plays a very large part. The dryness of the air with the average steam plant is very marked. It is very hard for us to keep plants alive in a home because the atmosphere is so dry. We know the effect of that type of dryness on the mucous membrane. Of course, there is no satisfactory way of humidifying the air. There is no apparatus on the market which will give the necessary volume of vapor in the air which we find in the outdoor atmosphere. We can't remove that factor entirely, but we can control it by teaching parents to air their homes very thoroughly. As you go into a home, on your calls, if your nostrils are at all sensitive, you are struck by the deadness of the atmosphere, as well as by the dryness, even in the best of homes, particularly where the father smokes a great deal at night. Very few homes are thoroughly aired out once a day as they ought to be.

Another factor is excessive clothing. We use too much woolen clothing, I believe, for the younger children. It is very interesting, from the standpoint of clothing, to notice the change in adult clothing and yet very little in the way we clothe our babies. I feel we can, in a great many cases where our homes are kept quite warm, do away almost entirely with woolen clothing in the winter time. It keeps the body in a moist condition.

The local sources of infection under our control are diseased tonsils, adenoids, sinuses, and so forth. Personally, I am very conservative about the removal of tonsils. As we take our histories we find so many of these children have had tonsils and adenoids removed, and we ask why. The mother replies the doctor recommended it because the child has a great many colds; yet the child continues to have colds. I believe tonsils play a very minor part in catarrhal infections. Of course, adenoids large enough to cause obstruction to respiration or to retain secretion and cause infection should be removed. Very often removing adenoids alone is all that is necessary, rather than subjecting little children 2 or 3 years of age to

the major operation of removing the tonsils, unless there is a definite chronic infection.

I don't know how much these colds are contagious. We see the thing break out in a whole schoolroom within 24 hours. How much the contagion plays a part in that, how much it is an atmospheric condition influencing the bacteria, I can't figure out. Probably no one can figure it out until we know what is the basic organism, if there is such a thing, back of these catarrhal infections. We speak of streptococcus infections. Probably most of them are secondary after the primary disease started.

From the doctor's standpoint the question of treatment arises. We have to look the facts squarely in the face. We have no treatment really worth anything from a curative standpoint in these catarrhal infections. We have of course palliative treatment, can use local treatment in the nose, use some little expectorant if we feel it necessary, and so on, but we have no curative treatment. We have no vaccine, I believe, which has any effect whatsoever on catarrhal infections. My own experience with vaccines has been so universally disappointing that I am absolutely giving them up unless somebody insists on trying them out. Whether the ultraviolet ray helps in the treatment of these infections is another question I have not been able to decide. I use it a great deal. I have used it locally in cervical adenitis cases for its tonic effect. I have been very much interested this last winter in cervical adenitis. A doctor in a nearby community is using ultraviolet ray and small doses of x-ray for adenitis cases. He has been very enthusiastic about the results obtained. As I study my series of cases without that type of treatment, without x-ray treatment particularly, I believe my cases get well just as fast as his by leaving them absolutely alone and not using any local treatment. I certainly never have these glands massaged with various counter-irritants, as is so often done, because I believe it breaks down nature's barrier against the infection.

I don't know how to increase the resistance, and I think that Dr. Levy has given us the only thing we can work on at present; that is, general education in the care of children, which will help in the control of our respiratory infections as in contagious diseases. I do emphasize that a child should be put to bed at the very onset of its infection until it has gotten up some immunity. That does not mean the child must stay in bed until cured, because lots of these little infections drag on 2 or 3 weeks, but the first 2 or 3 days until the flare dies down I believe they must stay in bed.

Dr. Stokes (Moorestown, N. J.): There is one factor that occurred to me which I don't think has been mentioned yet. That is the question of diet in the prevention of colds. I recall hearing the head of the Nose and Throat Department of the University of Pennsylvania say he felt that 90% of colds were caused by dietary indiscretions. In observing children in the last 5 or 6 years, I have felt that careful dieting did help to prevent them from picking up colds when contagious colds were in the schools. I think that is one line along which we can do a great deal of work in preventing colds. So many of our children are habitual candy eaters, eating food between meals, etc., and probably have chronic indigestion.

It seems to me if we can do more in regulating diets and educating parents in the proper feeding

of children, we can probably do a great deal in eliminating the tendency to catarrhal infections.

Dr. Jacob Reiner (Elizabeth, N. J.): I think Dr. Stern has too pessimistic a view of this thing. Although I haven't any experience in pediatrics, I think the whole thing is due to our better living conditions; just as better living conditions have decreased some diseases, summer diseases, they have increased the winter diseases. In a city like Elizabeth, among our poorer population, they develop respiratory diseases. Until we acquire immunity to steam heat we will have it.

As far as nose, throat and ear complications are concerned, and the removal of tonsils and adenoids, everybody thinks differently on it. The poor results following removal are due to the fact that we only do half the work. Nearly all these children have an accompanying sinus. Unless you clear up this condition, your success will be very poor in the removal of tonsils and adenoids. In the cases where they had adenitis, this winter, we have found quite a few rather large semi-fluctuating glands. We have taken out the tonsils and in most cases the adenitis has subsided without incision. In the nose, throat and sinus complications I think we ought to take radical measures, but in the ear we should be very conservative. Less and less incision of drums should be done. With conservative treatment we will have less running ears and less mastoid ears.

Dr. Silver (Newark, N. J.): I would like to say a word on the dietary factor of these respiratory infections. It has been very striking in doing work in the public schools at Newark, that among the children having a really marked malnutrition due to bad diet and feeding in the poor districts of the city, all winter respiratory diseases are comparatively uncommon. There is very much less respiratory disease as a whole in the poorer parts of the city, in the poorer sections in the schools, than in the better schools in the city or in private practice.

Dr. Stern: As there has been so much time used, I want to only thank the gentlemen who have discussed my paper. I am still very sorry to say we have not gained very much experience in the last year, as you heard that last statement especially, of Dr. Silver, about the poorer classes and the wealthier classes. That is a bad feature of the whole situation.

A PEDIATRIC VIEW OF PYURIA

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New Brunswick, N. J.

(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 8, 1928)

As pyuria is so common a finding in febrile and even in afebrile infants and children showing a great variety of symptoms not usually associated with the urinary tract, and as the diagnosis of pyelitis or pyelocystitis is so frequently made, it is well to keep in mind

what the underlying conditions may actually be. Over 30 years ago Dr. Holt first recognized and described pyelitis in children. Since then various classifications of the condition have been made. Primarily, one must consider those cases without any anatomic obstruction to the flow of urine and those cases which do show such an obstruction. Clinically one must bear in mind: (a) those cases that clear rather quickly even without treatment; (b) those that respond to ordinary alkaline treatment within a few weeks—by far the great majority of cases; and (c) those with recurring attacks of acute pyelitis or those with only a chronic pyuria and no other symptoms.

It is clearly established in urologic practice that neither nature alone nor added medical treatment will cure the underlying cause of these chronic cases and it is undoubtedly true that neglect of these cases will cause increased damage to kidneys and permanent disability or death. These facts are well known to urologists and commonly realized in dealing with adults but sometimes neglected in pediatric practice because of the so common feeling that children will outgrow or fight out anything.

With the manufacture of cystoscopes of such size that they may be passed and ureteral catheterization done by the expert on male as well as female infants a month old, the excuse for procrastination in making a proper urologic diagnosis in young patients is no longer allowable. Prominent pediatricians and many urologists are insisting that in all cases in which medical treatment is unavailing, and focal infection has been ruled out, complete modern urologic investigation should be procured to conserve renal integrity, promote health and save life. In other words—"The diagnosis should be made in the cystoscopy room and not in the postmortem room, as happens too often in diseases of the urinary tract in children."

Although it is generally conceded that pyuria due to obstruction, malformation and some infections, will not answer to ordinary medical treatment it is not definitely known whether many of the common colon bacillus

infections will run a course to complete healing as some have thought without treatment, or how far the potential damage may extend if the infection is allowed free reign; hence the importance of recognizing and treating early and supervising for a long period the common types of what may be called true pyelitis.

As to etiology, the condition is so much more common in girls than in boys that one is apt to neglect urine analysis in boys much more often than in girls. However, Sauer has reported (*Jour. A. M. A.*, Vol. 85, p. 337) in discussing neonatal pyelitis, 13 of his series of 15 cases as occurring in boys, and Graham in discussing 6 cases in the new-born, found 3 in boys and 3 in girls. Kretchmer, in a more general group, found 25 cases of pyelitis in girls and 2 in boys. In my experience, in the past 8 years, I have seen but 2 cases in boys and neither of them in my own practice. As for the common type of pyelitis, the belief is well grounded that the unguarded urethra in the female infant and the use of the diaper accentuate liability of the urethra to take in infection such as feces, contaminated liquids and foreign bodies may carry. Hematogenous routes of infection from extragenital foci and transperitoneal routes are probable but less common methods of infection. As to the malformations and other causes of obstruction one must pause when he considers that most of them are congenital or of long standing before symptoms are urgent and the earlier that surgical procedures are employed the greater the possibility of normal kidney function throughout life.

I wish to illustrate some of the common types of pyelitis from clinical notes.

Case 1. Alice C. represents the type that would have probably escaped detection and might have cleared spontaneously but for the care of a nurse who had experience with other cases. She was an apparently healthy robust child of 2½ years. She began refusing to void freely; would sit out the patience of Job without passing a drop of urine for minute after minute, even though she had previously announced her desire to void. A specimen was examined a few days after this perform-

ance began and found to be full of pus and highly acid. The urine and symptoms cleared so quickly under alkaline treatment that it is difficult to believe that she had more than a very superficial infection. From the fourth day of treatment the urine showed no pus and the child seemed quite normal.

Case 2. Marion H., 2½ years old, began acutely with fever and convulsions, which condition was diagnosed as a stomach upset. In 2 days she was apparently well but was examined because the parents were apprehensive of another convulsion. Nothing was found that could have caused the attack until the urine was examined. This contained a great deal of pus and a trace of albumen. In 2 days under the alkaline treatment the child was so well it was difficult to have the parents willing to continue the treatment and observation until the urine finally cleared after 2 or 3 weeks.

These cases illustrate the mild spontaneous type of infection that answers quickly and satisfactorily to treatment with alkali or might well be supposed to clear itself.

Case 3. The next case, found in my own daughter of 3 months, may have been one of the neonatal types. Florence C. had gastrointestinal symptoms beginning soon after birth and they continued with vomiting as the prominent feature. A consultant tried to prove pyloric stenosis. Finally a temperature of 102° to 103° appeared and the urine was found to be full of pus and albumen. This cleared slowly with alkaline treatment alternated with short periods of hexamethelenamin. There have never been any remissions, but the baby was very sick looking for a week.

Case 4. Mary E., aged 6 months, had been sent to Dr. Frank Matthews at 4 months of age for the repair of hair-lip and cleft palate. In the hospital, before operation, a slight temperature was discovered and a careful search was made for the cause. The urine on several occasions showed a few pus cells. Operation was done, however, and recovery was uneventful except that the temperature continued to range between 99° and 100°. One month later, at home, the baby began to refuse food and to be fussy, showed a degree of fever,

and the urine was found cloudy with pus. She had a stormy course for 3 weeks. Clinical improvement under the alkali alternated with hexamethelenamin was great but a few pus cells appeared in the urine off and on for a year. A cystoscopy was done even though her general condition was excellent. The urine from the 2 kidneys was indistinguishable and practically normal, and complete clearing followed very quickly.

In these last 2 cases, trouble was suspected in very young babies but the cause was not found until the infection had been present probably for 1 or 2 months and final clearing did not take place until the patient had been through a high febrile period and moderate toxemia after the delayed treatment was begun. If recognized very early might they not have been practically aborted?

Case 5. Represents a protracted case possibly secondary to a focus that Alice R. developed at 6 years of age when she had a scarlet fever angina. She was promptly cured of the scarlet fever by a large dose of the Dochez-Stevens serum given by Dr. Stevens in consultation. A heavy pyuria was found at the onset of the infection. Alkali and liquids were given without effect. Hexamethelenamin with calcium chloride, of each 15 gr. every 4 hr., was given to the point of causing hematuria after 4 days. Clinically, the child was well after a week of treatment but pyuria of a greater or less degree was found almost constantly for a year whenever a drop of urine from a fresh unsettled specimen was examined in the low power field with a microscope. She was seen by Dr. James Bently Squire and he advised against instrumentation, ordered all treatments stopped and suggested that the urine should not be examined for 6 months unless the child showed some symptoms. Although this advice was unexpected it proved good. The child had been doing well for the year preceding this and has continued to do excellently ever since. The useful principal of *laissez faire* was illustrated again. To have done a cystoscopy in this case would, in the light of experience, have been unnecessary and meddlesome manipulation.

Case 6. Only once have I seen the complete and perfect picture of pyelitis that one so often thinks of in connection with urinary tract infections in a young girl. She was 6 years of age and had been in good health until the day before she was examined. She then had a sudden chill, vomited, developed a high temperature, which dropped to rise again in 24 hours with the return of chilly sensation and moderate prostration; temperature was 105°. The rest of the examination showed nothing but vague abdominal tenderness, but the urine was cloudy with pus. With strenuous dosage of alkali and large amounts of fluid, symptoms disappeared entirely within a week and have not returned. Alkali was continued for a month or more.

Case 7. Elsie G., aged 15 months, had been treated as a feeding case, by a physician skilled in the use of the cystoscope in women. She, too, gave the picture of pyelitis; evidently a sick baby, temperature high, suggestion of tenderness in the flank, had no appetite, was extremely irritable. The urine was heavily loaded with pus and continued so for 2 weeks. Cystoscopy was advised as a pyonephrosis seemed quite possible. The amount of pus was enormous and the patient appeared very ill, but the family refused the procedure and it was not done. In another week improvement had begun, it was marked and continued, and finally the infection cleared entirely under the usual treatment.

Case 8. A companion case to this, is one in a child 15 months old who came to autopsy about 48 hours after admission to the hospital. She came in from the country where the doctor was able to make only infrequent visits and to obtain very unsatisfactory data for his guidance. It was known that she had temperature and severe symptoms for several weeks. The course had been continually down grade, in contrast with the foregoing cases. Had the condition been recognized by a complete urologic examination the autopsy might never have been done. The left kidney was found to be practically a pus sac with extensive involvement of the upper half of the ureter. There were other changes due to this severe infection. It seems that localiza-

tion and nephrectomy would have saved life here.

Case 9. Mary McC., 7½ years old, was a typical, recurrent case of acute pyelitis in a young girl. She showed pallor and a steady loss of weight with each exacerbation of the infection. I should have known better than to have attempted medical treatment at all. A month's trial proved unavailing and she went to a urologist who cystoscoped her, catheterized the ureters, and did several pelvic lavage treatments, effecting a very nice cure.

In many cases one is constantly thrown off. I have several times opened the ear drum for acute infection and found later that there was an underlying or accompanying pyelitis. Twice I have looked for pneumonia for several days in patients that later proved to be suffering from acute simple urinary tract infection. I have seen 2 cases as dreadfully sick, toxic and dehydrated as a neglected case of appendicitis with peritonitis. I cannot speak from personal experience about the infection of male infants. I have seen 2 in clinics with pyuria favored by obstruction due to congenital hypertrophy of the verumontanum, one of which was cured by electrocautery, used by Dr. Bugbee, to reduce the obstructing hypertrophy. Bugbee, in an article in the New York State Medical Journal, December, 1925, lists the lesions found by Dr. Wolstein, at the Babies Hospital, in nearly 5000 autopsies which showed over a hundred anomalies of the urinary tract—101 of these infants died under 1 year of age—and there were phimosis, stricture of the urethra, valve formation of the mucous membrane of the urethra or of the bladder which formed a flap that dropped over the vesical or the ureteral orifice, congenital hypertrophy of the verumontanum, spina bifida occulta causing interference with the proper expulsion of urine from the bladder, diverticula of the bladder, strictures and anomalies of the ureter, calculi of the pelvis of the kidney or in the ureter, cystic degeneration of the kidney, redundancy of the kidney substance, horse-shoe kidney, rudimentary kidneys, congenital absence of the kidney, fusion of the kidney, displacement of one or both kidneys.

One is forced to conclude that the urinary tract in children is subject to the same lesions and pathologic processes as that of the adult, with the added liability in female infants to the infection which we call pyelitis which is even more common than in adults, not excepting the pregnant woman. Further, a complete urologic examination is quite as possible in children as in adults and is indicated by the persistence of pyuria, hematuria or obscure abdominal pain, and as pelvic calculi are known to exist without causing marked symptoms, x-ray examination should be a primary part of the procedure. Attempts have been made to set an arbitrary time limit for the trial of medical treatment preceding cystoscopy, but it seems wiser to keep in mind the many possibilities at hand and to select the causes with regard to the clinical picture as it unfolds.

DISCUSSION

Dr. Joseph H. Marcus (Atlantic City, N. J.): Dr. Johnson has presented a complete and comprehensive dissertation on pyelitis, and his observations and deductions are thoroughly in accord with our pediatric experience. I regret, however, he did not dwell more upon the specific method of treatment. It seems that a large majority of the general practitioners of today are acquainted with this type of cryptic infection occurring especially in the female child and not infrequently one will find a specimen of urine awaiting on his first call, as it seems the laity, too, has been keeping this condition in mind.

One of the main difficulties I have experienced is insufficient alkalinization with potassium or sodium citrate; many physicians using liquor potassi citratis which contains approximately 4½ gr. of potassium citrate to the dram. At times, in a severe case, I have found it necessary to administer as much as 10 gr. every 2 or 3 hours day and night for the first 24 hours until alkalinization is produced; the depressing effects, if any, are overcome by the administration of stimulants.

Another important feature which Dr. Johnson emphasized is the continuation of alkalinization after the temperature is normal. In stubborn cases it seems advisable to alternate the administration of urotropin when the urine is acid, carefully watching the urine for appearance of erythrocytes. In all stubborn cases, don't fail to look for abnormalities of the genito-urinary tract. I am in accord with Dr. Johnson that discretion should be used before resorting to the use of cystoscopy in early childhood and infancy.

Dr. Helmholtz, of the Mayo Clinic, has recently shown that the majority of so-called pyelitis cases are really pyelonephritis. At times pyelitis, or its various combinations, is rather a confusing condition and still more so when allied with various infections.

Dr. London: I think we ought to congratulate Dr. Johnson for using the term "pyuria", because of what Dr. Marcus has just said. It has been

brought out by pathologists, and a few autopsies have been obtained, that we are not dealing with pyelitis. There is no such thing anatomically or pathologically. It would be much better to get away from the term "pyelitis" and use "pyuria".

There is one type of pyelitis which I have seen occasionally and which Dr. Johnson didn't mention. That is the type we see in older children. The last one I saw was a youngster 9 years old, a girl. She had no fever at all, but recurrent attacks of abdominal pain, not particularly severe, though at times bad enough for the child to be excused from school. Her temperature at all times had been normal on examination. She presented nothing abnormal. Her abdomen showed nothing at all, yet during these attacks the urine showed a large amount of pus. She cleared up readily under alkaline treatment, but comes down with recurrences. I feel this child ought to be cystoscoped. Her father is a physician and is not anxious to have his daughter cystoscoped. I should think that youngster probably has an organic lesion in her tract. I think we all see those cases occasionally. All that I have seen run over 6, somewhere between 6 and 10 years, and the only symptom is abdominal pain.

I wanted to ask Dr. Johnson if he personally has had any experiences or can tell us anything about the value of hexylresorcinol in treating these pyuria cases in children. My own personal experience has been very limited and unsatisfactory and I would like to know if anybody can tell us something about his results.

Dr. Nichols (Long Branch): I enjoyed Dr. Johnson's paper very much. I'd like to ask him 2 questions: First, what Dr. Johnson's criteria are for the cure of such conditions. Does he pay attention, after the pus has largely disappeared, to culture of the urine for colon bacillus? Secondly, when the urologist has done his darndest, what does he do to get rid of the pus in the urine?

Dr. Johnson: Most of the remarks were positive statements which I will answer if I don't agree.

As to the commonness of the diagnosis and the apprehension of mothers and doctors, I thought it was worth while reading the paper because I didn't believe it is quite as frequently thought of as has been said. There are some patients always ready with specimens. Usually it is an awful nuisance, but I think it might well be thought of more often.

As Dr. Harmon says, Helmholtz has made some autopsies on cases that have died of some other causes and found potential abscess, deeper infection of the kidney. I can't help feeling there are cases of a superficial mucous membrane infection of the collecting portion of the kidney and of the ureter and the bladder. I am perfectly certain that a great many cases go on deeper, that they heal under treatment and with time the good Lord heals most of them, probably.

Dr. London pointed out the fact that there are certain cases in older children without many symptoms except abdominal pain. I can't help feeling that the same type of case must occur in young children too. They usually come under the general feeding class. I have considered them so in my own family and occasionally with patients also. They might be found by repeated examination of the urine. I don't think one examination is worth anything. I feel very strongly about the

way the examination is made. I think a fresh specimen examined under low power field which shows, as Dr. Still says, 12 cells in the low power field, indicates infection.

As to hexylresorcinol, I haven't used it. Dr. Helmholtz has published some of his results which weren't favorable. He did show that urotropin as a urinary antiseptic was the best thing he had found. He also stated that many cases were cured with alkali and most of them are colon bacillus infections. The infection dies out rapidly.

Dr. Nichols asks about the culture in urine. I sent a case to Dr. Squire expecting him to take cognizance of it, and pay some attention to the patient, but the patient had done perfectly, looked well and except for the colon bacilli still in the urine, with very few pus cells, she was well. I asked other pediatricians about it. Most of them do not culture the urine repeatedly for colon bacilli or watch it until it disappears. I am not sure that Dr. Helmholtz still does. I don't feel it is important when the patient is doing well, gaining weight and looking perfectly satisfactory. When a urologist is unable to cure a kidney infection, I have nothing more to do.

YOUR FRIENDSHIP

(Eréne J. Riley)

There is something in your friendship

Very sweet for rainy days,
'Tis your thoughtfulness in finding

What I like in little ways,
And of doing, one by one,
Things that others leave undone.

There is something in your friendship

Sane and strong and glad and true,
Which makes better worth the doing

Everything I have to do;
And your friendly word and smile
Somehow help make life worthwhile.

There is something in your friendship

Very rare to find, my friend,
'Tis unselfishness in giving
Without stint and without end;

So there is—at last I learn—
Love that asks for no return.

There is something in your friendship

That has stood through many a test,
Giving me a sense of safety,

Of security and rest;
Friend of mine, my whole life through
I'll be glad that I met you.

DUODENOBILIARY DRAINAGE (Nonsurgical)

MAURICE ASHER, M. D.,
Newark, N. J.

(Abstract of a paper published in the October number of this Journal; read at the Annual Meeting, Medical Society of New Jersey, Atlantic City, June 7, 1928)

It is significant of the modern dominance of surgery in the healing art, that it is necessary to mention in the title of this paper that the drainage to be discussed is *nonsurgical*. I believe that, whenever possible, medical treatment should precede surgery, and that in biliary disease we should give more attention to that stage that is precalculus, so that by early recognition of a biliary infection we may prevent the formation of calculi and, perhaps, save the patient from an operative procedure.

I believe that biliary infection precedes calculus formation. With a short history and an early operation for calculi the gall-bladder will show only a moderate catarrhal inflammation. With a longer history all the structures of the gall-bladder may be involved and there may also be pericystic adhesions. This is the history of a progressive inflammation, the result of infection. If we can treat these patients in the precalculus stage before attacks of colic we can do much to prevent the formation of calculi. The symptoms of this period are those of so-called indigestion, distress after food, belching, burning, nausea, etc. Physical examination is negative. There may be some tenderness on palpation below the liver over the region of the gall-bladder. This is often absent. The fractional gastric test is negative or there may be a hypo-acidity or an achylia. There may be a pylorospasm and some delay in gastric evacuation. The gastro-intestinal roentgenogram is negative or occasionally there may be spasmodic appearance of the duodenal bulb. Biliary drainage will show, both in the duodenal contents and in the B bile, bile stained pus cells and bile stained colonies of cocci. These are on occasion very deeply bile stained. There may be also much

unformed and broken down material which we classify under the name of *débris*. This may be also deeply bile stained.

At the present time a number of duodenal tubes are obtainable, all very much resembling one another except in the bulbs which vary in shape and weight. For duodenal work, I have found Lyon's tube the most satisfactory as it readily enters the duodenum, and the openings in the bulb are sufficiently large to prevent clogging by mucus. A word of warning, however. I have seen so-called Lyon's tubes in the shops that were incorrect. The bulb was too large and the rubber was of inferior quality.

As to the therapeutic value of duodenobiliary drainage, I believe that cases of cholelithiasis with jaundice should be drained prior to operation in the hope of relieving the jaundice and so lessening the tendency to hemorrhage. Certainly a much more reasonable procedure than the giving of calcium salts and other substances to increase the coagulability of the blood. Catarrhal jaundice clears up readily by drainage. Biliary infections which include cholecystitis, choledochitis, cholangitis, sometimes with hepatitis and pancreatitis, are improved and cured by repeated drainages.

The treatment I have used for giardiasis—infestation with the *Lamblia intestinalis*—has been repeated drainages. In all the patients there has been a decided clinical improvement. In some the *Lamblia* can no more be found. In none has cholecystectomy been done, although it would be a reasonable procedure. Further study and observation will be required in these cases.

DISCUSSION

Dr. B. B. Vincent Lyon (Philadelphia): I have been very much interested in Dr. Asher's paper and feel that he is to be complimented on touching on so many aspects of this subject in a comparatively short paper.

In my discussion I would like to enlarge a little on some of the points that he has made. I believe it is becoming more generally accepted that all healthy gall-bladders or those with early disease, and a large variety of pathologic gall-bladders with unobstructed cystic ducts can be effectively drained by means of the duodenal tube and that the source of B, or dark colored, bile is actually from the gall-bladder in its larger part. For years this has furnished ammunition for stormy debate but is now

definitely settled since the appearance of papers by Sachs, Priban, Matzuo, Higgins and Mann, Whitaker, Lake and others too numerous to mention, who have confirmed by degrees the observations which I published 9 years ago and subsequently.

Although the drainage of the gall-bladder itself by a nonsurgical method is of great value diagnostically in nearly all cases and therapeutically in a large number, I personally believe that the therapeutic future of duodenal biliary tract drainage will be more concerned with drainage of the liver and pancreas, since it already shows considerable promise in the more direct management of some of our important problem diseases, such as the hepatic inflammations and cirrhoses; recurrent cholangitis; hemolytic jaundice with splenomegaly, other forms of jaundice, and arthritis with foci of infection for toxic cess pools within the hepatic intestinal tract. It has some place also in the management of pernicious anemia and in diabetes, despite the improvement in the treatment of these conditions by the liver diet and by insulin.

In some forms of nontraumatic epilepsy or epileptoid convulsions, resistant to other forms of management and hypothetically due to over accumulation of hepatic intestinal toxins of unknown nature, intensive drainage of the liver followed by transduodenal lavage has been remarkably successful in a limited number of cases in my own experience and in that of others who have communicated with me.

In regard to the subject of typhoid carriers to which Dr. Asher alluded, I have had several very successful results. To illustrate: A man, age 52 years, whom I saw in February, 1925, was a typhoid carrier 27 years after primary infection. During the Spanish War, in 1898, he developed a low running fever which lasted for about 7 weeks, and was considered malarial because it defervesced every few days, was associated with chills and then recurred. Biliary colics began in 1923, resulting in the removal of the gall-bladder containing several stones. During convalescence 2 months later patient developed a soft fluctuating tumor of the lower right abdomen which was evacuated of a pint of pus from which was recovered a pure culture of *Bacillus typhosis*. Cultures from the stool yielded a similar finding and he was then placed under New York State Health Board supervision as a typhoid carrier which resisted all measures of management. In February, 1925, cultures of this man's bile were heavily infected with typhoid bacilli, and from the persistent discharging sinus in the right lower abdomen. Associated with this was a typical picture of hepatitis and recurrent cholangitis with chills, fever, sweats and jaundice. Patient was given about 2 weeks of continuous drainage, removing over 2 gallons of heavily infected bile, and this was followed by intermittent drainages for several months coupled with the use of typhoid vaccine. By the following September he was typhoid free in all cultures, was returned to New York State and released from Health Board supervision. He has been followed at intervals of 6 months up to date without further relapses and has been brought out of a serious and dangerous state of health to himself and his community. Certainly no other form of such direct management is available.

Dr. Asher also alluded to giardiasis. This is a very common upper intestinal parasitical infestation, if we hunt for it more carefully in our duodenal drainages. It is of greater pathogenic im-

portance than has hitherto been recognized. Since I reported, with Dr. Swalm, in 1925, twenty cases then under our observation I have seen approximately fifty additional cases. In some instances it is responsive to biliary drainage with magnesium sulphate alone; in others, resistant to all therapy and constantly relapsing after biliary drainage, intravenous injection of neo-arsphenamin and hot transduodenal lavages with arsphenamin, mercurochrome, dimol, the French stovarsol Poulenc and the German yatren 105 Behring. For fairly long periods the duodenum will remain free from *Giardia*, and one may be led into a sense of security in having accomplished a cure when a sudden recurrence appears usually in the B or gall-bladder traction bile, leading to the suspicion that the gall-bladder is nesting and breeding parasites. That this is true in some cases has been recently confirmed by the finding of *Giardia* in gall-bladders removed surgically for this or other gall-bladder diseases; noticeably might be mentioned the report of Pietra and Allodi in the 1927 Italian literature⁽¹⁾ of 11 cases in which *Giardia* were found in the resected gall-bladders. Since this and other parasites have been found within the gall-bladder, presumably ascending by way of the common bile duct, it lends greater weight to the possibility of more frequent ascending infection of the gall-bladder and ducts by way of the duodenum than has hitherto been accepted.

I want particularly to point out the very frequent existence of cystic duct catarrh which produces partial or complete obstruction of the cystic duct, thereby giving rise to failure of recovery of typical B fractions, or in very small amounts. This condition can be definitely recognized under microscopic examination of the shaggy floccules recovered in the bile which will be found to consist of very dense, usually spiralled mucus that undergoes a characteristic oleaginous degeneration which chemically appears to be a fatty ester of cholesterol. There is no other definite means of recognizing this condition. In such patients the Graham cholecystogram will usually be positive, that is, no visualization of the gall-bladder takes place because the dye laden bile fails to pass the catarrhal blocked duct, thus suggesting pathology of the gall-bladder of a surgical degree. This is a very important differentiation to make in the interest of our patients, for we have proved in our study published March 17, 1928, in the *Journal of the American Medical Association*⁽²⁾, that such patients can be cured by repeated drainages and a surgical degree of pathology prevented. After clearing out the catarrhal cystic duct they will thereafter give normal gall-bladder drainages and show restoration of normal gall-bladder function when rechecked by cholecystogram. Many such patients can be spared from undergoing surgery. The same statement applies to cholesterosis and prelithiasis of the gall-bladder.

Lastly I want to point out that in the occasional cholecystectomized case in which dark colored bile is recovered closely resembling in certain instances a typical gall-bladder bile, this need not confuse the issue as to the gall-bladder being the usual source of B bile. It is quite evident from the recent publication by Counseller and MacIndoe in *Surgery, Gynecology, and Obstetrics*, 1926⁽³⁾, that in such cases the intrahepatic and extrahepatic duct system making up the biliary tree is often enormously dilated and contains pockets or diverticula from which stagnant dark colored bile can be recovered by drainage. A critical review of

such patients indicates that most of them have had periods of long continued obstructive jaundice prior to surgery, or have clinically recognizable pathologic changes in the liver, such as cirrhosis or hepatitis.

If, in our medical education, we can gradually develop a wider realization that duodenobiliary drainage has a wide application both diagnostically and therapeutically, that it is of great value to the surgeon in preoperative preparation and postoperative follow-up, and if we fairly acknowledge the obvious limitations concerned with both surgical and nonsurgical measures and by developing better team work combine our efforts, we will have taken a great step toward the Utopia of medical endeavor in the interest of our patients.

Before closing let me give you one word of warning. I have learned that duodenobiliary drainage has been exploited by doctors poorly trained in general medicine and in special technic, who improperly select for such treatment patients who manifestly require surgery; by the type of trained nurse who advertises her proficiency in other technical procedures such as colonic irrigations; and by the out and out charlatan who trades on the psychic effect of removing a small amount of bile or bile stained fluid from gullible but purse-pat people who are intrigued by the pseudoscientific patter of such menaces to human health. It is deplorable that such practices exist. It furnishes entirely proper ammunition for some opponents of this method of treatment, a certain number of them from overbalanced institutions with surgical axes to grind, but in turn reflects discredit on them as well as on a method whose merits and limitations are becoming more generally known.

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Dr. Otto Lowy (Newark): I wish to draw attention to the fact that biliary drainage is absolutely valueless as a diagnostic measure unless it is accompanied by a prompt and careful microscopic examination of the bile. Specimens must be examined within 1 or 2 hours after they are withdrawn. The disintegrating action of the bile on the cellular elements is so rapid that they become granular and are unrecognizable after a certain period of time has elapsed. Therefore, examinations made after 2 hours are practically valueless.

I also wish to draw attention to another phase which has been touched upon, but which I think has been somewhat neglected, and that is postoperative drainage. We have found in a number of cases in which the gall-bladder had been removed that there was no relief of symptoms; drainage showed showers of very small cholesterol crystals. It is quite apparent then that these crystals form and, due to their irritating action on the ducts, cause an irritation and inflammation unless treated. We have seen a number of these

cases that have cleared up after repeated biliary drainages.

In the early days of drainage we prepared vaccines in all cases of infected bile. This has been discontinued, because we have found that the vaccine was of no particular help and that the drainage alone seemed to be quite sufficient.

Dr. Asher has shown that the action of epsom salts is altogether different in cases where it is taken by mouth and where it is placed in direct contact with the duodenum.

I do not think I ought to go into detail as to the microscopic findings, because that really belongs to the realm of clinical pathology. However, I wish to say that no man should do biliary drainage and attempt to make a diagnosis without being fully familiar with the various cellular elements that are found microscopically.

Dr. George Blackburne (Newark): I consider it a great honor to be asked to say a few words in discussion of Dr. Asher's remarkably clear paper on this very important subject, and if I repeat or attempt to emphasize some of the points that have been mentioned by the author and by Dr. Lyon and Dr. Lowy, it is only because these remarks were prepared after reading the paper, and before hearing the discussion.

I would like particularly to dwell upon a few practical points in the value of duodenal drainage in connection with surgery. I wonder how many of the surgeons present take full advantage of duodenal drainage, either in preoperative diagnosis or postoperative treatment of their gall-bladder cases. It has been my experience that duodenal study, when performed by a man qualified to interpret his findings, runs a very close race with the use of x-rays, and when correlated with the latter, and combined with the history and physical findings, leaves the percentage of error in diagnosis practically nil.

The diagnosis of calculi, by finding the characteristic pigments and crystals in the bile, is a most valuable aid. In the preparation of a "bad risk" for operation, biliary drainage by the duodenal tube occupies a most important place. The jaundice and infection of the biliary tract can be improved and the patient put in a much better condition to withstand the operative procedure. I have used it with very gratifying results in this type of case, and intend to use it in the future in all jaundiced cases before operation. As a matter of fact, the average gall-bladder case can be safely tided over the acute stage, and by so doing and resorting to surgery during the quiescent stage, the condition and resistance of the patient will be improved and our operative mortality reduced to a minimum.

Postoperative cholecystectomy cases, with distress, can often be cleared up by a few drainages which will clear up the duct infection and help establish a free flow of bile and pancreatic juice. I intend to use the duodenal tube more freely in this class of cases and even believe it could be used with advantage as a routine in all postoperative biliary cases.

Gall-bladder cases, as I have already stated, do not, as a rule, demand the prompt operative interference that is so necessary in other acute abdominal conditions, and I am convinced that conservative gall-bladder surgery, first taking advantage of the excellent methods, as so clearly outlined by

Dr. Asher, is going to be more generally adopted and with very gratifying results.

Dr. Cohn: I would like to ask Dr. Asher whether an empyema of the gall-bladder of nonobstructive origin, not due to common duct obstruction, would be amenable to duodenal gall-bladder drainage, preoperative?

Dr. Maurice Asher (Newark): I think it would help; it would lessen the danger of the operation, but with the real empyema in the sense of a large gall-bladder filled with pus, that of course you would have to treat by surgery; but the drainage would relieve it and render the operation easier.

Dr. Cohn: You advise this as a preoperative procedure?

Dr. Asher: Yes.

I haven't anything more to say, further than that the object of the paper was to bring the procedure and its results again before the profession as a great advance that has been made in the use of the duodenal tube.

ANALYSIS OF 250 GALL-BLADDER OPERATIONS

MAX DANZIS, M. D.,
Newark, N. J.

(Abstract of a paper published in full in the October number of this Journal; read at the Annual Meeting, Medical Society of New Jersey, Atlantic City, June 7, 1928)

The paper is based upon a study, through a personal follow-up, of all cases operated on within a period of 15 years; 92% of the total number being followed up with particular reference to the recurrence of symptoms and percentage of re-operations in the drainage cases. Postoperative sequels were also studied. The advantage of cholecystectomy over cholecystostomy operation is brought out through analysis of the end-results of 3 groups of cases; one being that of a series of 140 operations, consisting of 84 cholecystostomies and 56 cholecystectomies, and 9 patients upon whom the drainage operation was performed in this series required re-operation for recurrence of symptoms.

A subsequent follow-up of 102 cholecystostomies shows that 17% of those required re-

operation; in 11 of whom stones were found in the gall-bladder and the other 6 suffered from cholecystitis with adhesions; 1 developed cholecystitis and pancreatitis. Only 67%, or 69 cases, in this last series may be considered completely free from symptoms 3 years following the operation.

Of the 56 cholecystectomies included in the first series, 84% are classified as free from symptoms; of the second series, we find in 113 cholecystectomies 90 patients, or 80%, are free from symptoms; 8 are improved and 8 were untraced. The total number of cases reported in this series was 250; there were 227, or 90.8%, females; 23, or 9.2%, were males.

The total number of cholecystostomies is 107, or 42.4%. There were 141 cholecystectomies, or 57.2%. In 2 cases there was a choledochostomy performed in addition. There were 16 deaths in the whole series. The mortality in the cholecystostomy operation was higher than that of the cholecystectomy. This is explained by the fact that some of the patients upon whom the drainage operation was performed suffered from severe complicating constitutional diseases, such as chronic nephritis, acute pancreatitis, chronic respiratory disease, etc.

In the cholecystectomy operation, the mortality may be classified in 2 distinct divisions: (1) Those with complications such as obstructive jaundice, chronic pancreatitis, etc. (2) Those without complications. In the uncomplicated cases, the mortality was 3%. Drainage in the cholecystectomy operation is, in the author's opinion, not generally indicated. It predisposes to postoperative hernias, extensive adhesions, secondary infections, and, prolongs convalescence. In the last 35 cases included in this series, 60% were not drained. The author believes that drainage is indicated only in those cases where there is soiling of the peritoneal cavity, or where large raw liver surface is left.

The incidence of postoperative hernia in the cholecystostomy operation was 7%, as against 3.5% in the cholecystectomy operations. Injury to the bile-ducts can only be avoided by careful isolation and identification

of the cystic duct before it is clamped and ligated. It is only through a very good exposure and careful dissection that such injuries can be avoided. Postoperative adhesions may be obviated by scrupulous peritonealization of the raw surfaces and a minimum amount of drainage.

The author concludes that in the hands of the experienced surgeons, cholecystectomy is the operation of choice in most cases. Cholecystostomy is the safer method in the hands of the occasional operator, or in the presence of complications. The cystic duct should always be visualized before it is ligated. Drainage in cholecystectomy is only indicated where there is reason to believe that there was soiling of the peritoneal cavity during operative manipulations. He advocates the drainage operation only in all acute suppurative gall-bladder diseases, particularly when associated with pancreatitis and cholangitis.

DISCUSSION

Dr. Edward J. Ill (Newark): We have reason to be thankful for such an excellent report of so large a number of cases. Those of us who have worked out statistical material know how difficult this matter is. I also want to compliment the Doctor on the excellence of his results.

As to the gall-bladder operation, I still feel that I am a tyro, though I have operated on gall-bladders ever since Lawson Tait described his first operation about 1876. I have been more and more impressed with the large number of cases that have been operated on and have not been bettered. At the Academy of Medicine Dr. Danzis gave a very excellent report of a large number of cases he had done up to two years ago. I said at that time to one of my friends sitting by me, "I am under the impression that I see a case a week that has been operated on and is no better."

The prompt answer was, "That is an impression."

Well, I had no figures to present. The paper was read in February and from that time until I went on my vacation at the end of June, I had noted 17 cases that had been operated on and were no better. These 17 cases did not come from a small circle of men in the neighborhood where I live, but they came from as far as Rochester, Minnesota, from the University of Pennsylvania, the Postgraduate School in New York. Good men have been operating on these cases and yet some of them are no better. I feel that we do not understand the true etiology of gall-bladder diseases and thus are unable to remove the cause.

Don't let us forget that most of the cases of gall-bladder disease are rather an inconvenience than a danger to life. I have seen but one case of death from rupture of the gall-bladder. The death rate as we have been given it today is 16 in 250.

No such number would have died if they had been let alone. Let us bear that in mind in our surgery.

I am more careful every day in selecting the case I am going to operate on in gall-bladder disease. I consider it a personal affront when a patient comes back to me and says she is no better.

I had occasion, and was glad to do it, to send some cases to Dr. Asher for his opinion, an opinion which I value very highly. If I can get anybody else to cure that sort of case, rather than have an operation, I want to do it. From the Doctor's report, it seems that about 80% of his cases have gotten well. That is a very good result. I don't know what the reports are from other sources, but I reckon the mishaps must be very great. I reckon that in most carefully selected cases, cases that absolutely need the operation and have definite gall-bladder symptoms, an average of 75% would be mighty good surgery. Since Charles Gibson has reported the subperitoneal resection of the gall-bladder I have followed that procedure. It leaves a perfectly covered area; it needs no transplantation of peritoneum, and I think the results have been markedly better.

Dr. Cohn: Last year, at the Mayo clinic, I heard Dr. Judd say that there are a number of patients who give clinical symptoms of gall-bladder disease and upon operation they find that the gall-bladder is macroscopically normal, but still he stated that by removing the gall-bladders in those cases, the patients are relieved of their symptoms. It would seem to me, from what I heard this afternoon from Dr. Asher and Dr. Lyon, certainly a clinic like the Mayo clinic, if there was anything in drainage without surgery, ought to find it. You see the same thing in New York at the Postgraduate, men like Dr. Erdman and others who remove such gall-bladders, and I wonder why they don't use this other method of treatment.

Dr. John J. Gilbride (Philadelphia): We see patients who have recurrence of symptoms following cholecystectomy, and we see patients with symptoms following cholecystostomy. The fact that one has removed the gall-bladder should not lead one to believe that all the pathology in the upper abdomen has been eliminated. The gall-bladder is a little alcove off on the side,—off the ducts. One should be guided by the pathology found in any individual case, rather than to regard all cases of gall-bladder disease as cases for cholecystectomy. It wouldn't be possible to consider, at the present day with our present knowledge, all cases for cholecystectomy. We have advanced far beyond that stage. There are definite pathologic indications, definite pathologic lesions present when one should remove the gall-bladder. I have seen patients with gall-bladder disease where at my first examination I was perhaps a little in doubt as to whether it was the gall-bladder or the appendix that was involved. These patients were in an interval. Later on I have had an opportunity to examine these same patients and I found definite subacute symptoms of gall-bladder disease.

I believe that when the gall-bladder is not extensively diseased and when definite indications for cholecystectomy are not present a cholecystostomy is the better operation. The presence of adhesions with the gall-bladder is positive evidence of recurrent attacks of cholecystitis.

Dr. Rita S. Finkler (Newark): I would like to ask Dr. Ill to briefly outline the system followed by the Carlsbad doctors in treatment of gall-bladder.

Dr. Edward J. Ill (Newark): The Carlsbad people, or those who take the treatment, call it the cure. They start between 5 and 7 a. m. and go from one spring to another, and at certain springs are asked to drink 210 c.c. of water. The Sprudel salts contain about 80 parts of sulphate of magnesium and 60 parts of sulphate of soda. While they go from one spring to the other, they are drinking this water, and keep it up according to the physician's direction for 1 to 2 hours. By that time they have taken about 2 liters of water, and they have listened to the beautiful music in the valley.

Now, Carlsbad salt is not a physic; it is so only when taken in extreme doses. You can well understand that if a person goes on drinking this water for a length of time, washing out the stomach completely, at last the water gets in the duodenum unadulterated by stomach mucus and stomach contents and thus exerts its influence directly on the duodenum, as Dr. Lyon and Dr. Asher have described to us.

Dr. Max Danzis (Newark): I want to express my thanks to the gentlemen who participated in the discussion of this paper; and I want to say this: that I have no unreasonable inclination to do any indiscriminate gall-bladder surgery. I don't urge patients to be operated on for trivial gall-bladder complaints, unless I find there is a definite indication for such an operation.

When a patient comes to me with a history of one attack of gall-bladder disease, I always tell that patient—"This is your first attack and you may not get another for years". I don't believe that one should operate just because the patient gives a history of one attack, but when there is a history of repeated attacks of gall-bladder colic, then an operation is, to my mind, not optional but imperative.

As regards the mortality of which Dr. Ill spoke, I want to say that while it may seem rather high, when we analyze the causes of the deaths we will find that out of the 16 patients who died, 3 suffered from ruptured gall-bladders, and were moribund at the time of admission. One of those cases was a male, 72 years old, who did not give a history of attacks of gall-bladder colic, at least if he did have them he had no recollection of it; but when I saw him, I obtained the history that at 2 a. m., that is about 8 hours before, he was seized with sharp abdominal pain extending to the back, followed by marked rigidity of the abdominal muscles and moderate degree of shock. We operated on him within 1 hour from the time of his admission to the hospital, and found a perforation of his gall-bladder and a localized peritonitis. The operation was performed under spinal anesthesia. He made a very good recovery, but 14 days later developed an erysipelas of his face and scalp and died within a few days after onset of that disease. He gave a history of having had several attacks

of erysipelas before, and a chronic otitis media.

Another death reported in this series was that of an empyema of the gall-bladder, stone in the pancreas, and biliary fistula; 1 died as a result of chronic tuberculosis with an acute exacerbation. So you can readily see that the mortality of the uncomplicated cases is not as high as it appears to be at first.

One can always doctor his death rate by juggling his statistics. It is not my intention to do that. My case histories will show that in the straight cases of pure and simple, uncomplicated cholecystectomy operation, where there was no jaundice and where the patient was thoroughly prepared, the death rate is 2.7%.

Then again, how may one tell what would have happened to these 250 patients who were operated on for gall-stones, if they were allowed to continue their lives without any surgical interference? How many of them would have developed, in the course of time, various serious complications associated with gall-bladder, such as empyema, obstructive jaundice, pancreatitis, ruptured gall-bladder and malignancy of that organ?

As far as the Carlsbad cures are concerned, I can't see how any patient with large stones in his gall-bladder can be cured there; or for that matter with any sized stones. Furthermore, I have seen patients who have taken repeated Carlsbad cures, one in particular, whom I have seen in several attacks of gall cholic. He went to Carlsbad, took the cure and was supposed to have recovered, but later developed attacks of gall-bladder colic, and upon operation many stones were found with pericholecystic adhesions.

As to chronic cholecystitis, it is true that in many of our large clinics, where a great deal of gall-bladder surgery is done, we see gall-bladders removed that apparently are normal; but we don't see the pathology after the gall-bladder has been examined. That organ may appear to the observer to be normal, but upon microscopic examination it is found to be pathologic.

As regards the symptoms the Doctor spoke of in the operated cases, there are a certain number of patients who have some recurrences of symptoms, even after cholecystectomies. In my own series, there are 6 or 8 mentioned who had attacks of pains. Some might be due to new calculus formation in the biliary passages. Most of these symptoms are probably due to adhesions that form after operation, but the percentage of recurrences in cholecystectomy operations, and by that I mean real pronounced symptoms, such as colic, or jaundice, is very small. If the operation is done carefully, with all the necessary precautions for prevention of adhesions, the postoperative results will be better.

If I find a diseased gall-bladder, even of the noncalculus type, it seems I would rather remove it than drain it. All that one accomplishes by draining that type of gall-bladder is simply the formation of extensive postoperative adhesions which would probably cause symptoms that were just as bad and probably worse than those that brought the patient to undergo the operation.

It has been my experience in all those patients upon whom I re-operated following a previous cholecystostomy operation, that the adhesions were very extensive and troublesome. This was particularly true in those cases where the gall-bladder was sutured to the parietal peritoneum during performance of the drainage operation.

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if:

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

COLLATERAL READING

One of the notable facts relating to the general literature of the past few years has been the steadily increasing number of books and of magazine articles dealing with medical or health problems and designed particularly for the intelligent lay reader. This having long been "a consummation devoutly to be wished", we welcome the progress made toward enlightening the general public concerning questions of life and proper living, but it opens for medical practitioners a new problem; i. e., the necessity for keeping themselves well informed regarding current literature.

We like to think of members of our profession as "cultured gentlemen" but, without any intention of starting or reviving a discussion as to what constitutes "culture", we yet have to admit that such distinction can properly be conferred upon those only whose interests extend beyond the confines of strictly professional practice. Interest in and a certain degree of knowledge of art, music, and literature are certainly essentials in any definition of "culture". Through our department of "Esthetics" we have striven to recognize and to stimulate this broader cultural interest on the part of our readers. It now seems both opportune and wise to extend the amount of space devoted to such topics, and we are starting in this issue of the Journal a new department which shall be devoted to consideration of books and articles of a semi-scientific character and to general literature that may seem worthy of the special attention of physicians. It will not be possible to review all such material, so rapidly do new books appear these days, but we may present critical reviews

of the more important ones and direct attention to others in a suggestive manner.

Knowledge and understanding of what our patients are reading about medical subjects are of great practical importance. In the sick room, and more particularly in the drawing room, conversation turns easily these days to psycho-analysis, behaviorism, birth control and a host of other topics upon which the physician is expected to speak with a degree of scientific information if not with the voice of authority. An embarrassing situation arises when the medical man is less well informed than the layman concerning the latest public pronouncements upon one of these topics.

So, we launch another experiment in the development of this Journal. Read this month's contribution and express your opinion upon the desirability of its continuance.

COUNTY SOCIETY PROGRAMS

In most of his talks to county medical societies last year, Dr. Morrison stressed the importance of devoting the time of at least one session per annum to a discussion of some aspect of professional economics. It certainly would not be a difficult matter to arrange such a program in any county in New Jersey, and yet we have heard of only a few instances in which his recommendation has been adopted. As American Medicine very aptly puts it, these matters are of vital concern to the physician and, "from the standpoint of practical living, they are far more vital than a consideration of papers dealing with frambesia or yaws, or even the morphology of the diphtheria bacillus".

Concerning this subject, Dr. Fishbein, re-

porting his observations of medical society work (A. M. A. Bulletin, 23: 40, 1928), said: "I have noticed in most of the state societies an utter absence from the official programs of discussions dealing with social medical problems and problems of medical economics. The Wisconsin State Medical Society held a meeting at which one entire session was devoted to problems of medical economics and social medicine. There were papers on the program of the Minnesota State Medical Society, and there was such a program in a recent meeting of the Virginia State Medical Society. If we are to accomplish anything in our efforts to direct the trend of public opinion in matters of the future of medicine as to whether it is to continue to be an individualistic practice of medicine or social medicine, these things must be discussed in such places as will bring them to the attention of all of the membership of the organization. That applies not only to social medical problems, but equally in relation to scientific advances in medicine."

The Program Committee of the State Society might well consider the advisability of devoting one general session of the next Annual Meeting to social or economic problems, but, the best place for consideration of these questions would seem to be the component county societies, where more time can be spared and better opportunity is afforded to secure individual opinions.

THE WOMAN'S AUXILIARY

The former Assistant to the Executive Secretary, Mrs. E. C. Taneyhill, who has now been put in full charge of our educational program, will of necessity devote considerable of her time this winter to further development of the women's auxiliaries to the state and county medical societies, in order that these new organizations may be brought into active and useful support of the State Medical Society and with a view to properly coordinating their activities. For more than a year the Journal has been devoting a special section to "auxiliary" news and explaining the reasons for and progress of this general movement to utilize the aid of our women relatives. We again ask all our confrères to read that part

of the Journal and to give full personal support to the local auxiliary. Read that section of this month's Journal and see that your wife, daughter, mother or sister does the same.

In our report to the House of Delegates, in June, we said, concerning this subject: "In this connection, we would respectfully urge upon members of all county societies the necessity for giving the auxiliaries whole-hearted support. Unless they be accorded encouragement and moral support, we cannot expect them to function with any notable degree of efficiency. Please remember that the women did not thrust themselves upon us; they were invited by the State Society, and later by each county society, to form an auxiliary organization. There is not a single county medical society in this state that cannot benefit materially by proper utilization of this reserve force now at hand. Each auxiliary has great potential possibilities. Let us give active support, and aid them in development and direction of their energies. Above all, please do not sneer at the movement, nor otherwise discourage efforts to develop latent power. Auxiliaries have proved helpful to the profession in other states; they are even now doing well here; they will be fully, or only partially, successful here just in proportion to the amount of cordiality meted out to them by the members of this Society."

AN EXPLANATION AND APOLOGY

In the October Journal, among the original articles, we published the 2 papers read at the Annual Meeting of the State Medical Society by Drs. Maurice Asher and Max Danzis, but failed to publish therewith the discussion that followed their presentation. Omission of this discussion was due to an accident in the editorial office which was not detected until it was too late for effective correction. When the Editor started on vacation not all of the stenographic report of proceedings had been received, and he could only leave instructions that the reported discussions, when received, should be revised and attached to the papers selected for publication in the next issue of the Journal. Unfortunately, through misunderstanding of a portion of these instructions,

the discussion pertaining to the 2 papers referred to above was not so treated; the stenographer's transcribed notes were received but were not sent out for revision until October first, at which time the Journal was already printed.

We have made explanation directly to Drs. Asher and Danzis, and have apologized to them for the error—for which we, of course, acknowledge our personal responsibility—and now desire to make this public explanation and to apologize to those whose remarks were not published as they should have been, and to all of our members who were deprived of the privilege of reading that discussion in its proper place.

In an effort to correct this error, we have accepted a suggestion made by Dr. Danzis and are publishing in this number of the Journal abstracts of the papers by Drs. Asher and Danzis, with the full discussion appended.

NEW SECTIONS?

When, at the request of the Program Committee, the Trustees authorized the holding of special section meetings—dealing with Ophthalmology, Otology and Rhinology, and with Pediatrics—during this year's convention of the State Medical Society, it was understood that the plan might be extended to embrace other medical or surgical specialties if the experiment resulted successfully. There is no doubt whatsoever about the success of the recent meetings, for both sections voted unanimously in favor of continuance; there was a good attendance at all their sessions; the specialists in attendance (not customarily present at our Annual Meetings) helped to swell the total convention registration; and, the papers presented were of good quality and elicited lively discussion. The question will, in consequence, arise: Shall we establish other sections?

The Trustees will probably be holding a meeting in the near future, and will wish to know whether other sections are desired, and the Program Committee will certainly wish to determine at its first conference whether it has to consider further extension of this feature of the convention. Now is the time

to let your wishes be known. Division of the society into 14 sections, after the model of our national organization is not desirable; our total membership—or at least that portion of it which can possibly be induced under any circumstances to attend—is too small to justify such a procedure. But we have a sufficient number actively interested in several of the special branches of medicine to warrant consideration of starting some sections additional to those already established. Urology might muster a goodly group, its field being quite distinctive, and, as in the 2 sections previously mentioned, another gathering of congenial workers would be massed without seriously interfering with the attendance and work of the general medical and surgical gatherings. The great interest now being manifested in the various aspects of physiotherapy makes us wonder if it might be well to form a section for development of this tendency and for the purpose of effecting a closer relationship among those working with x-rays, radium, ultraviolet, artificial sunlight, and mechanical diagnostic and therapeutic appliances.

We suggest these subjects merely to open a discussion. If you wish to see any particular section developed, take action at once; give your views to the Chairman of the Program Committee, or, submit them through this office.

TELL US YOUR VACATION EXPERIENCES

The Chairman of the Publication Committee, Dr. Charles D. Bennett, gave us a Special Article for the October Journal, recounting in most interesting fashion his midwinter vacation trip to South America. The number of commendatory remarks already received, expressing appreciation of that story of a pleasing trip, reminds us that this is not the first travel story we have published and that in every instance such publication has met with the hearty approval of our readers. We are, therefore, encouraged to look for more articles of a similar character, and we herewith invite members of the State Society to submit for publication reports of their experiences and observations while on summer vacations.

In Memoriam

DEDRICK, Thomas S., formerly of Washington, Warren County, New Jersey, died of pneumonia in the British Memorial Hospital at Marseilles, France, September 10, 1928.

Dr. Dedrick was born in Milford and was 65 years old. He was a graduate of Hahnemann Medical College, Philadelphia. He was a member of the Artie Club of New York, an honorary member of the Kiwanis Club of Easton, Pa.; Mansfield Lodge, F. and A. M., and the First Presbyterian Church.

For several years Dr. Dedrick represented Warren County Medical Society on the Welfare Committee of the Medical Society of New Jersey, and he maintained an active interest in this last mentioned organization even though he had withdrawn from private practice and departed from the state to accept an appointment in the United States Navy.

HALPERIN, C. J., of 641 High Street, Newark, New Jersey, died at Beth Israel Hospital September 30, 1928.

Dr. Halperin was born in Russia 45 years ago, but came to Newark with his parents when a lad of 5 years. He was graduated from the Newark High School.

Four years ago Dr. Halperin was chosen Professor of Dermatology at Bellevue Hospital and Medical College of New York University, where he had been on the teaching staff 15 years. He was head of the dermatologic department of Beth Israel Hospital and consulting physician of Irvington General and other Essex County hospitals.

In the World War Dr. Halperin offered his services. He was made a captain and served as dermatologist at Camp Lee, Virginia, about a year. It was during that time that his wife, who, before her marriage was Miss Tina Hollander, was stricken with influenza and died. She left 2 daughters.

Dr. Halperin later married a first cousin of his deceased wife, Miss Bertie Hollander, who survives him. He also is survived by the 2 daughters, Harriet and Rosalind Halperin, and by a young son of the second marriage, Sanford Halperin.

SUTTON, F. A., of 156 North Day Street, Orange, died of heart disease, October 19, 1928.

Dr. Sutton suffered a severe attack during the summer, but recovered and was able to resume practice until a few days before his death, when his condition became serious.

Born 47 years ago at Hackettstown, he lived in Orange 19 years. He was a graduate of Cornell University Medical School.

Special Article

CASUAL GLANCES AT MEDICAL LIFE IN PARIS

It is difficult for a physician to free his mind entirely of medical affairs, and even when on vacation he is apt unconsciously to keep one eye open for anything striking within his field of medical observation. So it happened that in Paris this summer, despite all the distractions that should have been, and to an extent were, occupying the mind, we could not help noticing a few interesting features of the city's medical life.

We observed last year that medical quackery is by no means limited to these United States, but that even in Germany, with its rigid requirements governing license to practice medicine and with very strict laws for prevention of irregular practices, the quack has been thriving and exists in large numbers. In Paris, this summer, our attention was attracted one morning to the number of osteopaths advertising in the daily paper—the Paris Edition of the New York Herald. There were 4 such advertisements in a group on 1 page; and we noticed later that these same 4 practitioners repeated their announcements in other advertising mediums that were likely to fall into the hands of American or English readers. Two years ago, at dinner one evening with a prominent French physician, who happens also to have taken an M. D. degree from one of our best American universities, we inquired how it was possible for an osteopath to acquire the right to practice in France, where the laws controlling licensure are perhaps the most strict of any in Europe. "If an American physician, no matter from what university he graduated nor what state license he holds, must take a French university examination (the Sorbonne, in Paris) before he can be permitted to practice medicine in your country, how do these osteopaths manage to carry on their business? It is inconceivable that they all procure the Sorbonne stamp of approval. Does your Government make any effort to suppress unqualified or irregular practitioners of medicine?" His reply was both interesting and enlightening: "I have no idea that they secure a legal right to practice medicine, and I imagine that the authorities pay little or no attention to them. The reasoning of the licensing body probably is that these osteopaths are out to catch American dollars, possibly a few English pounds, and that as long as they confine their activities to American and English travelers and leave the

French people alone, the Government need not seriously concern itself about the situation. In other words, if our guests are foolish enough to employ irregular practitioners of that stripe, all of them being their own countrymen, it would be rude of us to deprive them of the privilege. But, I can assure you that osteopathy has no standing in France and osteopaths no following among the French people."

It would seem that the osteopaths operate upon the theory that if Ephraim is joined to his idols he will wish to consult them even while traveling, and it might be profitable to establish stations along the way where idols may be worshipped.

An amusing feature of one of the "ads" is that the name of the firm of osteopaths is—"Guy and Guy"; quite appropriate.

Our next observation was a more interesting one in that it bore directly upon some recent work of this society. Passing the Academy of Medicine, on Rue Bonaparte, we noticed a placard calling upon the public to assist in abolishing diphtheria; setting forth, by months, a tabulated record of the number of cases reported in Paris from January, 1927, to July, 1928, with the total number of deaths; and, concluding with the statement that "practically all of these deaths could have been prevented by the simple procedure of immunization". Comparing the situation with our own Antidiphtheria Campaign in New Jersey, it was interesting to note that the city of Paris is conducting the same kind of fight in almost exactly the same way; posters, showing existing conditions, appeal to the public to assist in its own protection, and offer to furnish immunization freely to those who cannot afford to pay for such protection.

The figures as to morbidity and mortality were as follows:

Number of cases	in 1927	in 1928
January	299	425
February	319	448
March	365	463
April	303	334
May	314	340
June	284	298
July	252	
August	137	
September	132	
October	221	
November	292	
December	430	

Apparently, a small sized epidemic broke out in December, 1927, and ran for a period of 4 months ere it showed receding figures. There had been 275 deaths among the 3348

cases recorded during 1927, a mortality of slightly above 8%.

One difference in the preventive measures taken in Paris, according to an American physician now practicing there, is that instead of employing toxin-antitoxin for immunization the French are now using almost universally the "anatoxin"—antitoxin which has been treated by formol and heat for removal or destruction of its toxic qualities.

Third on our list of observations is one concerning the rise and fall of medical cults. We have heard a good deal recently about the decline of chiropractic and osteopathy, and there seems no doubt that both these fads are following the course of other similar quackeries. That "Christian Science" will ultimately join the long list of exploded delusions is highly probable, and one evidence of a break in its fortifications came to light this summer; it told us nothing not already known by most physicians, but it is the first public announcement of the sort, for benefit of the laity, that we have seen. The Paris Edition New York Herald, of August 16, 1928, contained the following news item:

CHRISTIAN SCIENCE INSURGENTS PLAN TO CALL DOCTORS

Matter Still Too Tough for Mind, Is Opinion of Follower of Mrs. Eddy

"Noted leaders of the Christian Science movement have prepared a public announcement approving a policy of coöperation with medical science which may effect a revolution in Christian Science practice, the 'Daily Express' reports.

Christian Scientists who follow their lead will no longer scruple to call in the aid of a doctor, instead of relying exclusively on faith and on mind discipline.

The considerable number of deaths among Christian Scientists, who spurned medical assistance in cases of grave illness, has caused the leaders of the Christian Science Parent Church to discourage such orthodoxy.

Mrs. Annie C. Bill, the leader of the Church in England, has drawn up a statement, which is to be published this week, stating the case for coöperation between Christian Scientists and the medical profession. Her manifesto has the approval of prominent American Christian Scientists.

This repudiates the idea that the calling in of a doctor involves any disloyalty to the Church or to the teachings of its founder, Mrs. Eddy. Hitherto Christian Scientists have been officially discouraged from seeking medical aid, and often a qualified medical man has been summoned only in the last extremity, or when there was a probability of an inquest.

"The new announcement is, in effect, a realization that the triumph of mind over matter is not always a practical proposition in our present stage of development," one of Mrs. Bill's followers explained."

The "naiveté" with which the above announcement is made is just as mirth provoking as the statement is of itself important. The vast majority of Christian Scientists never have "scrupled to call in the aid of a doctor" whenever there was anything serious the matter, but it is encouraging to learn that at last the "leaders of Christian Science" are taking notice of "the considerable number of deaths among Christian Scientists who spurned medical assistance in cases of grave illness". It is high time for them to be shocked by the number of deaths among people whom they have, by their teachings, raised into a state of fanaticism that induced needless and wholly useless self-sacrifice.

When in Paris, we usually make our abode at a quiet little hotel on "the left bank", and our daily walk takes us past the famous old hospital—La Charité—which fronts on Rue Jacob and extends for nearly a full city block along the Rue des Sts. Peres. Time has wrought many changes in the neighborhood, and doubtless in the institution itself, but this ancient hospital is even today "up-to-date" in most respects and the visiting physician can find much of interest in its wards and clinics. We were not intrigued, this time, to enter its open portals further than to enjoy a view of the beautiful gardens of the double quadrangle formed by the buildings. The flower beds were lovely and we were delighted when granted the privilege of photographing them in natural colors.

One of the changes from the original, made some years ago, is that the street level floor of the building along Rue des Sts. Peres has been converted into small stores and the second story, over such shops, is occupied by the resident shop keepers, while the third floor is still used for hospital purposes. We suspect that the rents received help materially to meet hospital expenses. The situation is not unlike that where our large city hotels find it profitable to convert much of their ground floor plan into stores.

Medical Ethics

THE SLUGGISH BRAIN

John Hammond Bradshaw, M.D., F.A.C.S.,
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Maladaptation of theories has caused much vexation of spirit. We must not mix facts and our theories. We must not confuse the brain and the mind and the soul. We can agree, however, that the brain can get sluggish, for we know that the brain is an anatomic

organ of the body human. Who will deny that brains rule the world and that brain activity and brain power constitute the secret of human success? We speak, therefore, of the sluggish brain in the same sense that we speak of the sluggish liver. The efficiency of the body is impaired by any sluggish organ; the output of the organ is impaired.

It is hardly necessary to go deeply into the anatomy, physiology, or psychology of the subject. But it is a fair proposition that the brain is the organ of the mind. If this were false, why should the action of the mind be knocked out by a blow on the head? What happens to the soul when a man is struck by a locomotive and, in consequence, lies unconscious for many days or many weeks? If the phenomenon of sleep is a mystery, is not the return to consciousness and spiritual awakening after such an accident to the brain the greater miracle?

Consider. Here we have in the brain an organ only a few inches in size and 40 odd ounces in weight, shut up in a tight bony box. It contains, conservatively speaking, *millions* of cells and nerve fibers: not cells in the hollow empty sense; not fibers in the stringy sense of sinews and cords, but centers of concentrated live potentialities and live wires, each with its official job. As most of these cells are in the cortex, the space that they can occupy is limited. We are therefore not surprised to know that they are microscopically small, some even 1/100,000 of an inch in diameter. It is interesting to remember the marvelous fact that over 10,000 separate ideas can be registered in one inch of grey matter! (Read Helmholtz, Bain, Maudsley, *et al.*). Most astonishing it is that the transmission of these ideas is perfectly automatic—no pump, other than the heart propelling the blood, is required for the oiling system. Action is often instantaneous, and for years can take place without effort or pain. This “out-mechanizes” any known mechanism! We even can store away and neglect these cells for long periods of years and then have the ability to single out one or more of these ideas, or memories, and use them. Just remember that these little storage reservoirs are even less than 1/100,000 of an inch in size!

It is idle for the theologian or others to deny that mind depends upon matter. The fact will always remain that when the circulation of a part of the brain is cut off, by stroke, tumor, or otherwise, that part of the brain ceases to function. Does any man retain his mind entirely after he gets softening of the brain?

But all of our brains are not in the head. The nervous ganglia—the sympathetic system—are really also brain centers, inasmuch as they dominate positive activities that combine to make a personality. And this can be said, too, of the endocrine system of glands. The expression, “team work”, is here no idle figment of speech. All this is consistent with those catchwords, “trophism” (Loeb), “action and reaction”, “automatism”, “interactionism”, “parallelism”, and theories of materialism (Cameron). It is well to remember that it is foolish to believe that existence of personality is entirely solved by action and interaction of the internal secretions.

We believe that a focal infection—a tooth or a tonsil—can influence the body physiologic and cause high temperature and consequently a sluggish brain and a sluggish mind. We believe that toxic agents, drugs or alcohol, can also do this. There is a lot in the autotoxemia theory, but the word has been much over-worked. How about great grief? How about a tendency to great offence against the moral law? Is there not a pathology of the mind, if not of the soul?

If, as John Keats said, “this is a vale of soul making”, are we not by necessity to act true to the moral code when we keep the brain from getting sluggish? Just as an unused organ causes atrophy of that part of the brain that controls its activity, so a lazy brain impedes the action of various departments of the mind.

It is an edict of pedagogy that brain exercises develop brain; for the brain is no exception to the law demanding exercise. Cerebration is mind at work and the product is thought, emotion, bodily activity, volition and intellection. It is not necessary to debate the influence of heredity *versus* environment, and we are saying what is axiomatic when we announce that education is a good thing. The effects of habit, suggestion, stimuli, excitement, music, religion, *necessity*, even drugs and crime, and, of course, instinct, are all seen in the activity of the brain.

But the ink of this pen will not have hit its objective if it does not show that a sluggish brain will make a sluggish mind.

By taking thought, one cannot perhaps add one cubit to one's stature, but by making effort one can keep the brain from lazy habits. Even a poor brain is subject to training. The reward of the effort is worth the price.

Was it not the activity of one or more of those little brain cells that allowed Harvey to discover the circulation of the blood? Would Edison have invented the electric light if he

had permitted those same brain cells to get sluggish or had poisoned their perineural spaces with drugs or rum? What is genius but some form of unusual cerebration? Did William Osler win his name and fame by any fluke? Franklin was an example of a man who had a brain and *used* it. What he accomplished and started in one short span of human life is almost unbelievable. But why multiply examples? Of course they are exceptional; but why are they exceptional?

Efficiency and success are worthy objectives, and they *can* be attained by persistent and active use of the human brain.

Medical Economics

A NEW COURSE FOR THE MEDICAL FACULTY

L. L. McCoy, M.D.,
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(Reprinted from *Medical Economics*)

When the average medical student has received his diploma and degree, he feels that success is at hand and no more worries and difficulties are forthcoming.

He feels that he knows about all there is to be known in his profession. He is of the opinion that when he gets into practice his word will be authority and people will flock to him for advice.

But as soon as he picks up his hat and diploma and goes out to look for a location, his difficulties begin. Prior to this the problems of becoming located and established looked easy enough. Now he finds that, although he has learned the science of medicine thoroughly and well, he is hopelessly at sea when it comes to the *art* of medicine.

He has had no experience regarding actual contact with patients. He may know the manners and etiquette of society well enough, yet when it comes to meeting and dealing with his patients there is a vast difference.

Sick folks are in need of a special type of psychology and behavior on the doctor's part. He must be courteous, cheerful, sympathetic, honest, gentle. To approach a patient in a gruff, cold, scientific attitude creates a wrong impression. The patient becomes fearful, distrustful and regrets having come. He often feels that the physician is more interested in his pocketbook than in his disease.

To be sure every physician should be interested in the financial end of his practice,

but not to the extent of injuring his standing or his patient's feelings, unless, of course, he has a dead-beat patient. His patients want to be considered first and foremost when they come to see him, and it is his business to show them every attention.

When he is going to college the young man sees patients galore, but not private patients and there is a great difference. His practical work brings him into contact with patients in charity wards and out-patient departments where they are herded together, examined, diagnosed and treated with little or no idea of courtesy, practically no sympathy or gentleness, and with the thought of getting them out of the way as fast as possible.

He has no thought or care of ever seeing them again. Often he becomes so imbued with these ideas and attitudes that he carries them on into his own practice. It is only after some very bitter experiences that he realizes his failing and attempts to mend his ways.

Who is responsible for this state of affairs? The Medical College largely because there is little or no place in all its curriculum where the real ART of medicine is imparted.

How can this be remedied? One way is to establish a so-called Medical Arts course in which every student is instructed as far as possible in the theoretic and practical side of the art of medicine. This instruction should be under the leadership of men of wide practical experience and who are known as artists in dealing with patients.

A still better method perhaps would be for every graduate in medicine, after finishing his internship to associate himself for at least a year with an ethical physician of wide practical experience and a large clientele.

He would learn the niceties, courtesies and policies that could never be learned as quickly in any other way. By so doing, his success as a practicing physician would be much surer and easier.

Another phase of the profession that is sadly neglected is the business side. I doubt if there is a class of professional men who are so deficient in the business end of their work as are doctors. No class of men are so gullible and make such bad investments. No class of men spend their income so unwisely.

Why? Because they have had little or no training during all their courses in the principles of business. The business terms and phraseology which should be understood and used by everyone are often misunderstood and misapplied by medical men, young ones especially. There is probably no class of men who keep their accounts so haphazardly.

Doctors are poor collectors and often they carry thousands of dollars on their books indefinitely. People have learned this and as a consequence the doctor is the last to be paid, and often is never remunerated.

A valuable course that every medical college would do well to institute is a Business Course for Physicians in which every student would learn the basic principles of business as applied to a doctor's office. The course should include in a brief way principles relative to medicolegal procedures—narcotic laws, fee splitting, statistical records, coroner's inquests, medical society proceedings and the like. It should also include in a summary manner the code of medical ethics.

It would seem that at present the average medical curriculum is as full as it possibly can be but I believe that there is no college that could not give at least 1 hour and perhaps 2 hours a week during each semester for such a course. I have no doubt that it would be very popular as well as practical and every student would be eager to use such a course.

A so-called elective course that would find a good deal of favor among students of medical colleges might be designated as a Medical Literary Course, in other words, a course that would prepare students for writing and lecturing on subjects concerning medicine and allied sciences.

Every medical man sooner or later finds himself confronted with the desire or necessity of writing case records, reporting scientific investigations and discoveries, giving papers and lectures, and so on. Few are really prepared. It is a reflection on the English language to note the way some material in our scientific magazines is written by college-bred individuals.

Esthetics

THE DOCTOR YESTERDAY, TODAY AND TOMORROW

(Presidential Address of R. Julian Estill, of Lexington, before the Kentucky State Medical Society; reprinted from Kentucky Medical Journal, November, 1927)

It has been said, and I fear with some degree of truth, that the doctor of today is not what the doctor of former times was. The family doctor of previous generations was, like the minister, a prophet and seer in his community, he was the family and community mentor to whom all kinds of questions of moment were referred as a court of last re-

sort, his word was final and satisfactory to every one concerned; he was consulted about intimate family problems. Probably a very small part of his time and thought was given to purely medical subjects, he had not the scientific mind or training of the present day doctor and no doubt in many instances was really a very poor doctor who was unable to make an accurate diagnosis or give rational treatment if a correct diagnosis was made, but there is no gainsaying the fact that he occupied a place in the heart of the family and community which is today totally unknown.

It seems to me that it might be interesting and profitable to us if we could find out why this change has come about and what we can do, if anything, to place the doctor back in the position of love and respect from which he has fallen. It is inconceivable that the many new cults and sects that are thriving today in our midst could have existed when our grandfathers were the family doctors in their respective communities, in other words, their very existence or at least their progress and establishment must be laid in part at the door of the present day doctor and his method of dealing with his patients.

I would have you understand that I would not at all wish to have the doctor of today one whit less scientific or efficient than he is, rather I would say, go on advancing and make as much progress as possible, the more the better, nor would I for one instant underestimate the value of the wonderful advances which have taken place even during my medical lifetime, and which are taking place every day. Osler once said: "It is hardly wise for a doctor to sleep more than 8 hours or he will find himself so far behind he will never catch up with the procession." One has only to stop a minute and name some of the tremendous things that have been accomplished in medicine in late years to be duly impressed, and have a proper appreciation of the doctor of today. To mention only a few, like improved sanitation, the practical eradication of typhoid fever, and the work that is now being done to wipe out diphtheria and scarlet fever. One has only to mention a few of the almost superhuman accomplishments of modern day surgery and obstetrics to appreciate what has been done and is still being done to realize what modern medicine has done for humanity. I sometimes wonder if modern medicine is doing more for humanity than modern doctors are doing as individuals.

Undoubtedly the highly trained specialist in any of the several lines of medicine today is rendering a scientific service to humanity which would astound the family doctor of

former generations and probably would make him feel that he was not really a doctor at all, but is it not possible that the real reason for the change which has taken place in the standing of the doctor in the community might be that this very selective specialism which means that it takes 5 or 6 specialists to make 1 whole doctor, and that the individual contact and personal side of the association of the patient with his doctor is lessened, is the reason why the old time intimacy is no longer experienced. This may and I believe does to some extent, account for the change in the relationship between the patient and his doctor. I believe, however, there is another potent factor in the changed relationship, we have already referred to the fact that a relatively small part of his time and thought was given to purely medical subjects by the old family doctor, in other words, he was a man who was an "outstanding personality" in his community because he had a broad culture which was greater than that of his clientele. Is that true of the doctors of today? Is it not possible that we of this generation have been in such intense pursuit of our own little special line of medicine that we have lost sight and touch not only with every other branch of medicine, but have neglected all of the broader culture which comes from reading standard lay literature, studying music and art so that they may be appreciated, and all of the other branches of culture that are necessarily so important a part of the life and occupation of the educated people with whom we work and live, is it strange that these people do not look up to us if we are ignorant of the finer things of life which make for broad culture and make one who is versed in these things interesting and sought for companions to educated and cultured people?

I know that no talk to medical men can be of much value unless the treatment is very clearly outlined and in this instance I am going to give you a picture of the ideal doctor of today who would, I believe, very largely reestablish the doctor to the high estate from which he has fallen.

I would increase rather than decrease the wonderful scientific work that the medical profession of today is doing so that the succeeding generation of doctors can go on still further than we have gone and be able to solve many problems which seem to us today well nigh impossible.

I believe that every specialist, regardless of what his work is, should be the outcome of a number of years' experience in general practice. A man will naturally drift into the special line of work he likes best and will devote

most of his time and study to that line, so that he will unconsciously after a number of years eliminate other lines of work and develop and perfect himself in the technic of the chosen special line. This will make him a much broader specialist and his work will be far more worthwhile than it could possibly be if he had specialized at the beginning of his medical career. He will always be sufficiently interested in general medicine to read his journals and keep up to some extent with what is being done outside of his special line of work, and he will remember that his patient has an entire body instead of just one organ which might be accounting for the present disability, and, in consequence his treatment and management of the patient will be far more satisfactory both to himself and to his patient.

It is not humanly possible for a doctor working under the tremendous strain of present day conditions to work continuously from year to year without taking suitable vacations. I have felt that a doctor can do more and certainly better work in 11 months than he can in 12. One gets tired and in consequence irritable and the character of work he does under such conditions is not in keeping with his ability or what he does when he is feeling fit. It is wonderful what a change one experiences in his attitude to his work after a good vacation.

I believe every doctor will do better work and get a great deal more pleasure out of life if he will undertake systematic daily reading of standard lay literature. It is surprising how much can be accomplished by reading one-half an hour each day. One can find many guides for reading which will be interesting and profitable and which will require very little time and will serve the purpose of getting the mind off of medicine in addition to getting a broad culture from reading after a comparatively short time. This will also add an interest and pleasure which will be very well worth while. Naturally some lines of reading will be more interesting than others, but when once fairly launched in this fascinating pastime one may start almost anywhere and the collateral reading which will unfold itself will reveal enough reading matter to choose from for the rest of your life.

The doctor should cultivate a desire to know something about art, he should hear good music, and in this day of the phonograph and radio there is no lack of opportunity for hearing good music regardless of where you live. This, too, is a form of culture which grows rapidly and one can derive the keenest pleasure and profit from it.

Every doctor should have some kind of hobby. The particular kind of hobby will naturally be decided by the individual tastes; with some it will be hunting, and no end of pleasure can be derived from your dogs and guns. Another may take up fishing, still another may prefer some of the sport games, such as golf, tennis, bowling. These things should be undertaken with the intention of enjoying them and using them to keep one mentally and physically fit to be the very best doctor he is capable of being. One might select some one of the branches of natural science, such as a study of animals or plants, and any of these things will after a little study open up avenues of thought and pleasurable employment that will be surprising.

The family doctor of the past was identified with his church. Too many doctors today are careless or even antagonistic to religion. The doctor must not be a prude, but I do not believe one can do for himself or his community all that he is capable of doing if he is not identified with a church. He is, or should be, an example to his fellowmen and if he is genuinely a Christian and takes his stand fairly and squarely with his church his example will be worth a great deal in his community. This is in contrast to the doctor who tries to use the church to further his own interests; such a man will deceive people very rarely if at all and will be very soon found out. Without being officious, the doctor should take an active interest and help in all civic and community problems. He should be posted on all such things and be able to give accurate and intelligent advice and help in all civic affairs.

Finally, my message to you is this: Be the very best doctor you can be with your ability, training and surrounding; make your patients feel that you are trying to give them the "best you have" and that you are genuinely interested in helping them.

Take good care to conserve as far as possible your own resources, mental and physical, so that you will feel fit for your task.

Broaden your culture in every way that you can, so that you will be a pleasure to your friends and to yourself when outside of medicine.

Be a Christian gentleman at all times. Stand out squarely and fearlessly in your community for all that is high and good and after all is said and done, one should not have to memorize any code of ethics if this rule was followed.

Take an active and intelligent part in all matters of civic interest and welfare in your community.

If these few suggestions were lived up to by our present-day doctors, I firmly believe that we would have a doctor who would be as much beloved, respected and looked up to as our grandfathers were as the "family doctors" of their day, and I know we would be better doctors and happier men.

In Lighter Vein

Dr. George Karpechenko, of the Russian Institute, has succeeded in crossing a cabbage with a radish. A more practical man would have crossed it with corned beef.—Judge.

Joe pretty near killed a freshman the other day for saying that Joe's girl looked as heavily constructed as the east end of a taxi traveling eastward in reverse.

The freshman got a flying start before he added that the taxi he was talking about had both doors wide open.—Ohio State '30.

Southwest Corner

Attorney—"Where was the defendant milking the cow?"

Witness—"It's hard to describe, Judge, but if you'll bring in a cow, I'll show you the exact place."—Whirlwind.

Desk Cure

Doctor (to wealthy patient)—"Yes, you're all run down. I suggest that you lay off golf for a while, return to business, and get a good rest at your office."—London Calling.

Safety First

"Offisher, you'd better lock me up. Jush hit my wife over the head with a club."

"Did you kill her?"

"Don't think sho. Thash why I want to be locked up."—America's Humor.

King of the Highway

"My father's Mayor," bragged a small boy, "and when he rides in a parade the motor cops go ahead and he doesn't have to pay any attention to any traffic rules."

"That's nothing," sniffed his friend, "My father's a truck driver."—American Legion Monthly.

Real Tragedy

Florida, they say, is being gorged with Republican voters. But the Postal Guide shows there won't be postoffices enough to go around.—Dallas News.

Or Bad Money

In Armenia, we are informed, eggs pass for money. The next thing to know is how one makes change for an egg in Armenia.—Detroit News.

Why Interest Lags

We have never regarded the recall of judicial decisions as a very important issue, as there hardly ever are any judicial decisions anyway, at least in important cases, until long after we've lost interest in the proceedings.—Ohio State Journal.

Observations from the Lighthouse

In April, 1928, the New England Journal of Medicine published a cancer number, presenting, among other features, a series of papers that had constituted part of the Cancer Week program of Massachusetts. As the cancer problem is pretty thoroughly discussed in these papers, we have chosen to abstract them and use the "observations" this month to direct attention to this very important subject.

Cancer

As a contributing cause of the increasing death rate from cancer, Robert B. Greenough (New England J. Med., 198:477, April 26, 1928) notes that, as so many deaths from other more readily controlled diseases have been eliminated, a greater number of persons than ever before attain the age when cancer occurs. In spite of the fact that no specific cause for cancer has as yet been established, many interesting and important discoveries have been made in regard to the disease in the past few years. Although the tissue in which the tumor grows appears to be influenced enormously by inherited characteristics, some additional factor, such as trauma or chronic irritation, is usually requisite to its development.

Cancer can be produced artificially in animals by 3 entirely different agents—chemical, as for instance by coal tar; physical, as with x-rays; organic, as in cancer of the bladder from infestation with the worm *Bilharzia*. The one common factor in these 3 different forms or artificially produced cancer appears to be that of long continued but not lethal damage to the tissue cells exposed to the irritant. The arbitrary border line of cancer is finally passed, however, and the process becomes malignant.

Broders, of the Mayo Clinic, has attempted successfully to classify tumors from their histologic appearance; to estimate the degree of loss of functional differentiation, and to check the results with the known end-results of treatment. In a series of breast cases studied by the author, the specimens were classified without knowledge of the end-results. Three degrees of malignancy were recognized: high, low and medium. The data were then assembled and it was found that in the low malignancy type, 68% of patients were alive and well at the end of 3 years; 33% in the medium class. The cases of high malignancy, however, as judged from histology alone, showed not a single survivor.

The arbitrary criterion which we employ to distinguish cancer from nonmalignant disease is the presence of cells infiltrating the deeper tissues in situations where such cells cannot normally occur. It is quite possible that the real dividing line lies somewhere else. Every pathologist knows that there are tumors on the border line, in which a positive decision from the microscopic specimen is impossible. This is perhaps one of the best arguments against a specific parasite as a cause of cancer, and undoubtedly favors the view that it is instead a biologic process, a peculiar form of growth of the previously normal body cells. Other new facts which have been established in regard to cancer are in accord with this idea. Thus, the important observations of Warburg, that cancer cells have the

ability to convert glucose into lactic acid in the presence of oxygen to an extent some 20 times greater than that possessed by normal cells, indicates a physiologic change in the cell metabolism of a magnitude commensurate with its increased power of growth. Burrowes believes that the vitamins play an important part in this extraordinary power of growth, but we do not know whether some special vitamin imbalance is a prerequisite to cancer growth, or whether the changed metabolism of the cancer cell consumes or employs vitamins in a manner impossible for normal cells.

Such is the situation today regarding our knowledge of the cause and nature of cancer and upon these facts we must construct our policy in respect to its treatment. Failing a specific cause, we can expect neither a specific diagnostic test nor a specific curative serum. By surgery and irradiation cancer can be cured, but less than 50% of the cases of cancer of all kinds that enter the wards of the Massachusetts General Hospital arrive there sufficiently early in the course of the disease to permit even an attempt at radical operation. In the early and favorable cases of breast cancer at this hospital, about 70% of patients are well at the end of 5 years; cancer of the cervix, if treated early, gives 50% of cures. A study of the records of all cases of cancer of the breast, however, shows only 15% free from disease at the end of the 5 year period, and only about 10% of all cases of cancer of the uterine cervix. In other words, 5 times as many cases of cancer as are now cured by surgery and irradiation can be cured, if only the treatment can be applied in time. The periodic health examination promises to aid in the early discovery of cancer but the adequate diagnosis and treatment of cancer require a whole group of men working in coöperation and supplied with all of the material equipment of a general hospital, including radium and x-ray facilities. The internist, the pathologist, the chemist and the physicist are just as necessary as are the radiologist, the surgeon and the specialist.

An attempt to supply such service has been made in Massachusetts under the Department of Public Health, by means of a state cancer hospital of about 90 beds and full equipment. In close coöperation with this central institution special cancer clinics have been organized in general hospitals in a dozen different cities throughout the state. The results of the first 8 months indicate that a real want is being supplied.

When it comes to the treatment of early cases, whether by surgery or irradiation, it is to be feared that every patient does not today receive the best that medicine can afford. There is a wide difference between the standard radical operation as practiced in the better clinics, and the operations that are commonly performed by surgeons throughout the country, even in the early and favorable cases. At the Huntington Hospital, 33% of cases of recurrence of cancer of the breast after operation are found to have been subjected to a primary operation which fell far short of the radical operation for cancer of the breast. It is difficult to comprehend the mental attitude of a surgeon who performs any operation short of the standard one in an early and favorable case of cancer of the breast, and thus deprives the patient of the opportunity for cure to which she is entitled by reason of the

advances that have been made in surgical treatment. In regard to irradiation there is also room for improvement, both in the technic of application of radium and x-rays and, to a far greater extent, in the judgment employed in the selection of cases for treatment by these agents. The value of the colloidal metals in the treatment of cancer is open to considerable doubt.

Early Diagnosis of Cancer of the Rectum

It is the opinion of Daniel Fiske Jones (New England J. Med., 198:487, April 26, 1928) that there should never be an error in this diagnosis after the physician has had an opportunity to examine the patient. Training of the laity to seek advice on the slightest suggestion of any change in bowel habit or sensation, and training of the physician to make digital and proctoscopic examination of the rectum are equally important. The training of one group and not the other would accomplish nothing.

Carcinoma of the bowel ulcerates early; therefore, bleeding should be an early symptom. The usual text-book symptoms are late symptoms. Seven diagnostic points are outlined by the author as follows: (1) *Constipation*. One must not only inquire about this symptom but must ascertain the increase in the dose of cathartics; also whether the patient is taking mineral oil. (2) *Constipation and diarrhea*. Rarely spoken of by the patient who thinks the frequent movements due to cathartics. (3) *Pain*. Not a prominent symptom, except in the lower abdomen due to obstruction, or down the sciatic, due to metastasis. (4) *Loss of appetite* accompanied by (5) *loss of weight*. (6) *Bleeding from the rectum*. Should be considered as due to carcinoma until *proved* that the cause is hemorrhoids. (7) *Age*. Carcinoma of the colon and rectum may occur at any age.

No x-ray examination should be made in suspected cases until digital and proctoscopic investigations have been made, and the rectum and lower portion of the sigmoid found to be normal. Carcinoma of the rectum is frequently missed by x-ray examination. Every effort should therefore be made to find the growth before one is put off the track by a negative roentgenogram.

Carcinoma of the Gastro-Intestinal Tract

Three factors militate against success in treating cases of this type, according to David Cheever (New England J. Med., 198:488, April 26, 1928): (1) The delay in diagnosis due to concealment of the lesion by its deep situation; (2) frequent inability to perform an adequate incision on account of sacrificing too much of a vital organ; (3) much greater liability to postoperative complications due to impairment of the visceral functions, the fear of which deters the surgeon from a thorough operation and the occurrence of which may lead to fatal issue. The contrast in these respects between an internal and external neoplasm is very striking. It cannot be too strongly insisted or too often repeated that carcinoma in the gastro-intestinal tract is at first a local lesion abundantly capable of extirpation and susceptible of complete cure.

In carcinoma of the stomach the sufferer is 2 to 3 times more likely to be a man than a woman. Comparative youth is not incompatible with the diagnosis since a few cases occur in the decade 21-30. In 75% of patients the earliest

symptoms, either from their location or character, point directly to the stomach. The remaining 25%, however, who complain first of general weakness and debility, loss of weight, constipation, pallor, backache, loss of appetite or general abdominal pain, constitute the group in which both patient and physician may be gravely misled. Unfortunately, it is a very common experience that when the onset of symptoms has been followed by correct diagnosis and operation, the condition has been found to be inoperable. It follows, therefore, that any symptoms pointing toward the stomach or epigastric organs, which are not relieved by symptomatic or expectant treatment in the course of a week or two, should be subjected to adequate diagnostic scrutiny. These symptoms in their order of frequency may be enumerated as pain in the epigastrium, a sense of fulness and distress after eating; sensations of the accumulation and belching of gas; anorexia, nausea or vomiting; in fact, any noteworthy change in the patient's digestive habit should receive serious attention. Moreover, symptoms of less pointed significance should not be ignored. Loss of weight, appetite, strength or ambition, complaint of backache, in a previously normal individual should suggest the possibility of some organic impairment and not be dismissed as some trifling disarrangement of function.

A carefully taken and critically analyzed history is the most important preliminary diagnostic step, which should be followed by a thorough physical examination. This is apt to be negative but may disclose a mass in the epigastrium which moves downward with inspiration. A widespread belief exists that when carcinoma of the stomach has advanced sufficiently to show a palpable mass, it is almost certain to have reached the inoperable stage. This is erroneous. Statistics show that in about 70% of cases the disease starts at or near the lesser curvature, between the incisura and pylorus, which is precisely that portion of the stomach most readily accessible to palpation; moreover, the nearer the growth is to the pylorus the more likely it is to have caused early obstruction, and the more amenable it is to treatment.

Analysis of the gastric contents is hardly likely to be more than suggestive as the presence of blood or partial or complete achlorhydria may accompany many nonsurgical conditions. By far the most important evidence is obtained by fluoroscopy and roentgenogram, as the typical filling defect of carcinoma is unmistakable. In early cases where appearances justify doubt, they present, nevertheless, as alternative diagnoses, lesions which demand operative exploration. By way of warning it is to be noted that such an examination in the hands of an inexperienced man may be wholly misleading, resulting in a false sense of security and fatal delay. If the patient's general condition is such as not to preclude radical operation, the physician should never permit himself to be totally discouraged by the apparent extent of the growth. Statistics show that although the disease may be locally extensive in the stomach, it does not become wholly inoperable by virtue of hepatic metastases. A further important justification for operation is the fact that if it discloses a hopeless condition it is often possible thereby to institute palliative measures which will make the

patient comfortable until a short time before death.

In the jejunum and ileum, carcinoma is so rare that but one case has been observed at the Peter Bent Brigham Hospital in the 15 years of its existence. The colon, however, is affected by carcinoma in more than one-half as many cases as the stomach, and here the record is decidedly more reassuring. The colon is physiologically less important to the individual than is the stomach, gives earlier symptoms with later metastases, is more accessible for operation, which yields fewer postoperative complications than does an operation of equal severity in the upper abdomen. The records of the Peter Bent Brigham Hospital from 1913 to 1927, show the maximum incidence (35.5%) in the sixth decade of life, but it is important to know that 4% of cases occurred in persons 30 years of age or under, while an appreciable number (17%) occurred in the ninth decade, which showed no instances of carcinoma of the stomach.

The physician must bear in mind that the disease in the right colon presents a very different picture from that in the left colon. In the cecum and ascending colon it is very insidious, and obstructive symptoms appear late, if at all, because the liquid fecal stream can find its way through a very small lumen. Such vague symptoms as mild attacks of colicky pain, a sense of fulness and accumulation of gas in the right iliac fossa often lead to diagnosis of disease of the appendix and removal of that organ through an incision too small to permit of adequate exploration. The typical neoplasm of the left colon presents symptoms due almost solely to obstruction of the lumen of the bowel. Rectal examination alone may be negative. A stool examination will sooner or later show either grossly recognizable blood or positive chemical reactions, and x-ray examination, after ingestion of barium by mouth, will show a tendency to stasis. If the symptoms approach those of complete obstruction, barium should never be given by mouth. Even in such cases hope should not be abandoned, as these neoplasms of the left colon, especially of the sigmoid flexure, where they are most common, may have existed so long as to have caused total obstruction and yet themselves be wholly local and capable of complete operative removal resulting in permanent cure.

The symptomatology and diagnosis of carcinoma of the transverse colon are intermediate in character between those typical of the right and left portions of the bowel. Such a lesion is, however, more easily demonstrated by palpation and is therefore likely to be diagnosed rather early.

In reviewing the status of carcinoma of the intestinal tract in regard to the feasibility of cure, there can be but one conclusion—that the disease is curable and that while we await the demonstration of the cause of cancer (which will be followed in all probability by the discovery of a nonsurgical method of cure), immense progress may be made in the efficiency of surgical treatment through education of both physician and layman. The latter must disabuse his mind of the gloomy conviction that cancer is hopeless; the former must be aroused to take action at the first warnings of the disease. The earliest symptoms of cancer, wherever situated in the body, are trivial; it follows, then, that all trivial

symptoms, unless they yield promptly to simple measures, must be considered potentially as the first evidence of a terrible but curable disease and subjected to every available and proper diagnostic measure.

Collateral Medical Reading

In one of the editorials of this issue of the Journal will be found an explanation of the starting of this new department, so it is scarcely necessary to say more here in the way of a formal introduction.

As the opening feature of our general book reviews, we have selected for republication an article that appeared in *The Saturday Review of Literature*, August 11, 1928: "The Ways of Behaviorism" by John B. Watson, Ph. D., a prominent psychologist, and formerly a member of the faculty of Johns Hopkins University: reviewed by Joseph Jastrow, Ph. D. of Johns Hopkins University and Professor of Psychology in the University of Wisconsin. No man in this country is better qualified than Jastrow to evaluate Watson's work and writing, and we know of no one, unless it be Joseph Collins, who can express himself so clearly and incisively.

"It is important to distinguish between behaviorism as a psychologic position, and the specific tenets of Dr. Watson, who claims a proprietary right to the term. I shall make the distinction by confining the Watsonian variety between the double bars of quotation marks. Behaviorism refers to the generally accepted position of substantially all psychologists that their science deals with human behavior: 'behaviorism' is an electric assemblage of doctrines approved by John B. Watson, together with a remarkable set of claims concerning their value, that involves a repudiation of the contributions of his fellow-psychologists. Such are the ways of 'behaviorism' in the year 1928.

It was not always thus. Dr. Watson made important contributions to animal psychology and to specific phases of human psychology. He followed and developed the objective method in psychology—a position fully approved by his professional colleagues. At Johns Hopkins University he did important work on the native responses of infants. His 'Behavior, An Introduction to Comparative Psychology' is a careful scientific survey containing many original contributions: his 'Psychology from the Standpoint of a Behaviorist' continues largely in the same temper, but makes some extreme and more questionable statements, which a sympathetic critic might ascribe to an over-zealous advocacy. His 'Behaviorism', a set of popular lectures, shows an amazing deterioration. Considering the uninformed clientele to which it was addressed, its cavalier treatment of what generally circulates as psychology is as questionable in taste as in logic. His recent pronouncements: 'The Ways of Behaviorism' and 'Psychological Care of Infant and Child' constitute astounding performances.

The 'behaviorist's' stock in trade is rather lim-

ited, considering the business he claims to do. There is the conditioned reflex (generalized to the response), the nature and limitations of which are still in doubt. Yet the entire range of human habit and acquisition is explained as conditioning, and human conduct however complicated becomes predictable, because it may be spoken of as stimulus and response. 'Why do men and women get married—why divorced—and what effect prohibition has on human behavior—woman suffrage? Let us study the problem as we would study the effect of continuous light upon the growth of a plant.' Then there is the (by no means new) discovery of the few complete patterned responses in the newborn infant.

On these premises we are informed that everything is acquired by conditioning, though the truth is that if we were generally subject to 'behavioristic' conditioning, behavior would be chaos and a rational life impossible. Heredity is declared a myth, and all the scientific workers in this field are dismissed as on the wrong track. The 'behaviorist' will make of any ordinary infant whatever you choose to order. Insanity is a delusion of the psychiatrists not of the patient. The subconscious is a figment of another abnormal deviation, and Freud and the phrenologists are of one stripe. 'In one sweeping assumption after another, the 'behaviorist' threw out the concepts both of mind and of consciousness, calling them carryovers from the church dogma of the Middle Ages.' Instinct is another imaginary creation, likewise imagery; and thought is but verbalized or subvocal behavior. Like the brave little tailor, it is 'seven at a blow'; and the 'behaviorist' chuckles as the giants fall, for to him they are pigmies. Yet the instrument of the 'behaviorist' is not even a sword or a sling; it is merely a waste-basket. With everyone holding a different opinion consigned to oblivion, the 'behaviorist' finds himself in full command, with decks cleared and no impediment of crew or cargo.

The intriguing question relates not to the ways of behaviorism, but asks how the 'behaviorist' gets that way. His own explanation is that he is concerned with what men *do*. Using what others would call imagination, he becomes an emissary from Mars, hovers over New York, notes the scurrying movements of its inhabitants and brings back the momentous conclusion that these human ants *are going to work*. Now all is translucently clear. 'Just think what a volume I could carry back to Mars on the behavior of New Yorkers if from some central position I could observe their whole 24 hour behavior for a few weeks or months.' That volume would be as meaningless as the scratchings on the sand in a barnyard, until it is interpreted by just those instruments of psychology that the 'behaviorist' repudiates and the true behaviorist utilizes. The 'people are going to work!' Sheer inference! Nobody who didn't know infinitely more than what observers could see, could ever reach any such conclusion. Why not conclude that these creatures, whether by early conditioning or the peculiarities of their equilibrium apparatus, were so built that they couldn't see a hole without, like the rabbit in 'Alice', running down it? How can a 'behaviorist' ascertain that they are darting down into the subway on the way to work? And why are Washingtonians without this habit?

But why anything? In wonderland you at least know what set of rules you are staying away from; in 'behavior'-land, which is supposed to be a land of prediction, the last thing you can predict is what the 'behaviorist' will hold on any question. Why does it follow from 'behaviorism' that when parents fondle their children, they are breeding neurotics and dependents? Yet Dr. Watson says so. What to make of it all I frankly don't know. So I appeal to others. An eminent scientist tells me it is preposterous nonsense, not worthy of scientific attention; another that it is an exhibition of colossal impertinence, that even granted that Watson is *the* superman of all times, he could hardly be so uniformly right and everybody else so incorrigibly wrong on so many different varieties of questions. I asked the question some years ago of a group of professional women who had listened to a course by Dr. Watson, and they replied: 'We do not take him seriously,' though one confessed: 'I did so to begin with.' I asked a Freudian, and he explained: Watson found early in his career that he had no *flair* for psychology, and decided that he would call psychology whatever he found he could do; 'behaviorism' is a form of compensation. I asked a fellow-psychologist and he sets forth that it is the desire to be different and attract attention; it is modernism in psychology by appealing to the allegedly ultra-scientific. I ask a business man and he says it is advertising. I ask a sociologist, and he says it is just an attempt to put something over, and Watson is laughing up his sleeve—doesn't believe a word of it. I ask a philosopher, and he says that that kind of mind, though shrewd and intelligent, is as devoid of a sense of logic as other able and worthy minds are devoid of a sense of humor. And I ask myself and give it up. But whatever it is in motive, in argument it is sophistry; and the constant fallacy is the fallacy of ignoring. Ignore all the evidence to the contrary on any position, and you can prove what you will, and incidentally disclose the folly of those who hold otherwise.

Perhaps we are all on the wrong scent. On the opening page we read: 'There was possibly too little science—real science—in Freud's psychology, and hence it held its news value for only a relatively brief span of years.' 'Now the newspapers are beginning to feed it ('behaviorism') to the masses, but still in broken doses.' Perhaps a new era is upon us and doctrines are to be judged by their news value. Perhaps the historian of the future will record: 'In the early twentieth century Einstein put across his doctrine of relativity; much credit belongs to his publicity agent.' There is only one man who can solve the puzzle of the ways of the 'behaviorist', and he does not choose to tell."

The Future of America

From among the many interesting magazine articles that have recently directed attention to problems bearing more or less upon our professional interests, we have chosen one from the April Harper's, and present it in abstract form. Although published anonymously, we are assured that it was written by an eminent biologist. Naturally, an abstract can scarcely do full justice to the article but we have endeavored to

give you the most important statements contained in this "biologic forecast".

"No one by taking thought can add a cubit to his stature, but society could, if it were sufficiently impressed with its importance, add some inches to the average stature of future generations. It could, if it would, breed a healthier, happier, more intelligent type than the general average of the existing race. By means of selective mating, which would require no more intelligence than that which is now employed in the breeding of domestic animals, feebleness of body and mind and even antisocial instincts could be greatly reduced and the general average of the entire population could be raised to a level more nearly that of the best existing individuals. This being true, a serious consideration of the direction in which we are now going and the probable outcome is one of the most important subjects that the human mind can contemplate. There is a tendency in all prophesy to see future events in either the brightest of the darkest colors, to picture a future that will be either a heaven or a hell. Let us try to avoid this tendency and to see things as they really are and to forecast not the best nor the worst possible future but the one that is most likely to be realized.

The menace of low mentality is perhaps the greatest danger that confronts any nation or civilization, but it is a vastly greater danger in a democracy than in an autocracy. It is, moreover, an insidious danger; for as long as intelligent leaders are in command it is not visible, but it is always present and may at any time lead to disastrous consequences. The Army mental tests, which have been decried but never disproved, as well as the records of our public schools, show an alarming degree of low mentality in this country. In the Army mental tests more than twice as many were found to be of inferior mentality as were in the superior grades. It is estimated that there are about 2 million mental defectives in the United States who need institutional care, about 5 million who have been mentally unable to get through the grade schools, and about 25 millions unable to get through high school. The ultimate standing and success of any popular government must depend upon the intelligence of its citizens. Hitherto we have assumed that intelligence depends upon education and that general compulsory education would solve this problem. But, alas, we now find that millions of our population are incapable of education beyond the elementary grades. In spite of the fact that we are spending more public funds on education than any other nation on earth, there is good evidence that the average intelligence of our people has been declining for the past 25 years at least.

In 1925 there were more than 23 times as many murders per unit of population in the United States as in England. Pittsburgh alone had as many murders as all England, St. Louis more than England and Wales; and these cities are not sinners above all others. The murder rate per 1000 people in this country is twice as great now as in 1900. In burglary, highway robbery, and other crimes we lead all the world. If we wish to form any just estimate of the character of the American people it is necessary to take into account these awful conditions. Of course it is true that these social parasites do not represent the American type, but they must be included in any honest assessment of our

human resources. We cannot avoid the conclusion that, although our human stock includes some of the most intellectual, moral, and progressive people in the world, it includes also a disproportionately large number of the worst human types.

Every year the United States loses more money in its war on crime than the 11 billion dollars advanced to Europe during and since the war. How long can our civilization go on bearing this enormous and increasing burden before it breaks down under the load?

By interfering with natural processes, eliminating natural selection, and undertaking to direct his own evolution man has assumed a fearful responsibility, but at the same time he is offered a glorious opportunity. For the first time in the long history of life on this planet it is given to a single species to take an active, intelligent part in its own evolution. If his artificial selection leads to the propagation of the best and the elimination of the worst it will conduct the race to new standards of perfection; if it reverses this process and breeds from the worst rather than the best it will inevitably lead to deterioration.

What America and all other nations should desire is not the greatest possible population, but the best possible.

In the recent world conference on population held at Geneva the English and American representatives favored artificial restrictions of births, whereas the French, Belgians, and Italians regarded such restriction as dangerous—presumably dangerous to their national pride and power—while the German representatives were divided in their opinions on the subject.

The thing to be desired, in the case of both nations and cities, is not the maximum but the optimum stationary population, and this can be obtained only by artificial means. Dean Inge has said that 'there is no hope for the basic social problem of population except in the scientific control of birth'. No one advocates an increase in the death rate; we must, therefore, look to a decrease of the birth rate in order to maintain an optimum stationary population, and intelligent beings should do this intelligently. This is the ground for advocating rational birth control, and it is the only way of avoiding the slow and wasteful regime of natural selection. Hitherto voluntary birth control has been practiced almost exclusively by the more intelligent members of society, and undoubtedly the race is the poorer because of it. Hereafter birth restriction must be encouraged or enforced among the less intelligent elements.

Vastly more important than the number of people in future America will be the quality and type of those people. Neither numbers, wealth, power, nor forms of government will determine our fate as completely as will the character of our citizens. Is it possible by means of biologic principles to predict what the probable result will be of the contracts and mixtures of the various races and peoples that constitute our present population?

Both heredity and environment are indispensable factors of development; and when 2 factors are indispensable it is useless to discuss which is the more important. There are, however, certain general differences between these 2 factors which are of great practical importance. Heredity is more specific, environment

more general; heredity is more constant, environment more variable; heredity is less easily controlled, environment more easily controlled. Therefore, in efforts for human betterment more attention is paid to environment than to heredity. Practically all existing agencies for human progress, such as government, education, religion, art, literature, science, medicine, sanitation, engineering, are directed to the improvement of environment, or what has been called 'eugenics'.

So far as we now know, there is only one possible way of improving heredity and that is by eugenics, or selective mating and a differential birth rate in favor of the better types. But if eugenics is ever to be put into practice it must be through the agencies of education, religion, the arts and sciences; there is no other possible way of impressing on society the vast importance of better heredity. These agencies already exist and, while they have hitherto been devoted largely to improving the environmental factors of development, it is not too much to hope that in coming years they will devote more attention to the improvement of heredity. Even in a program of eugenics education is still the hope and promise of human progress.

There are many parallels between our history and that of Greece and Rome at the height of their greatness. Now, as then, we see a general decadence of the family and of marriage, a great extension of voluntary birth control and sterility among the better classes, and the consequent breeding of the race from the lower levels rather than from the top. Now, as then, we see the importation of vast number of alien and inferior stock and general race mixture. Now, as then, we see the gradual extinction of the most gifted lines as a result of the dry-rot of luxury, the subordination of social duties to personal freedom, the demand for pleasure at any price. Now, as then, we hear the counsel of despair, 'Let us eat, drink and be merry, for tomorrow we die'. The shadows of former civilizations cross the stage like ghosts in Macbeth—Egypt, Assyria, India, China, Persia, Greece, Rome, Arabia. Will America also join in this ghostly procession?'

Communications

MECCA COLLEGE OF CHIROPRACTIC

(The following letter from Dr. Charles B. Kelley, Secretary of the State Board of Medical Examiners, and copy of the Supreme Court's decision upon the legal status of the above mentioned chiropractic school, deserve the attention of every member of the medical profession interested in the control of irregular practitioners):

Mr. Editor:

I am enclosing herewith a copy of the Supreme Court's decision in which they affirm the judgment of the First District Court of Newark in the case of the Board of Medical Examiners vs. the Mecca College of Chiropractic. This decision is a most important one, and I feel that it might be of interest to the members of the profession if you would give it a fairly prominent space in some coming issue of the Journal.

The history of the Board's attempt to regulate

chiropractic in this state has been rather long. There is on the books a statute which gives the State Board of Education the power to prosecute schools or colleges conferring a degree without permission. As I understand the matter, the State Board of Education never felt that they had sufficient funds to prosecute this particular school, or any other school. It was necessary, therefore, for the profession to have enacted a law regulating schools teaching medicine and surgery or any method of treatment of disease. This was done in 1924, at the time that Dr. Eagleton was Chairman of the Welfare Committee. It has taken over 4 years of legal delays to finally obtain this opinion which upholds the law. Whether or not there will be any appeal taken to a still higher court, I do not know. However, inasmuch as the lower court was sustained by the Supreme Court, it would seem quite likely that the Board will have the right to regulate schools teaching a method of treatment.

Sincerely yours,
Charles B. Kelley,
Secretary.

New Jersey Supreme Court.
No. 249. May Term, 1928.

State Board of Medical
Examiners of New Jersey,
Respondent,

v.

On Certiorari.

The College of Mecca of
Chiropractic, Inc.,
Prosecutor.

Submitted May Term, 1928; Decided June 27, 1928.
Before Justices Minturn, Black and Campbell.
For the Prosecutor: J. Taymond Tiffany, Esq.
For the Respondent: Edward L. Katzenbach,
Attorney-General.

PER CURIAM:

The problem in this case to be solved, as we see it, is a simple one, although the solution is not quite so easy. The question is—Was the prosecutor required to take out a license under the Act P. L. 1924, p. 395, entitled "An Act for the Licensing of Schools and Colleges Conducted for the Purpose of Training or Qualifying Students to Practice Medicine, Surgery or any Method for the Treatment of Disease or any Abnormal Physical Condition?"

The prosecutor's charter provides for the maintaining and operating school or schools, in which students may obtain a technical or general education in the science, art and philosophy of chiropractic and especially, a thorough education in the studies of anatomy, physiology, pathology, etiology, biology, nerve tracing, etc. The title of the Act is broad and most comprehensive, indicating a clear purpose, to include within its scope all schools and colleges maintained for the class of students designated. Section 1 follows closely the title, but adds to the words to practice medicine or surgery the words, or any branch thereof. It doubtless will be conceded, as it must be conceded, if the prosecutor is within the scope and meaning of the Statute; the State has the clear power and right to impose a condition for doing business in the State, viz the requirement that it shall first obtain a license under the Statute before conducting a school or college in the State. *Ferguson v.*

Tuttle, 95 N. J. L. 374; *State v. New Jersey Indemnity Co.*, 95 N. J. L. 308; *State v. Chapman*, 69 N. J. L. 464; *affirmed* 70 *ib.* 339.

The defendant was convicted in the First District Court of Newark and fined \$500. under the statute P. L. 1924, p. 395. This writ reviews the proceedings in that Court.

The complaint alleged and the evidence supported a violation of the act by the prosecutor.

The prosecutor is a corporation organized in Delaware in 1916; certificate of authorization filed in N. J. in 1919; it conducted its business in this State before the passage of the Act requiring a license, P. L. 1924, p. 395.

Prosecutor contends that the Act violates its charter rights; that it constitutes an illegal regulation of a lawful business; that it imposes unreasonable and unnecessary restrictions upon a private business.

Paragraph One of the Act provides:

"No school or college shall, after September 1, 1924, be conducted within this State for the purpose of training or qualifying its students to practice medicine or surgery or any branch thereof or any method for the treatment of disease or any abnormal physical condition without first securing from the State Board of Medical Examiners of this State, a license authorizing it so to do."

Paragraph Three provides:

"Said board shall issue its license to every school or college applying therefore which complies in all respects with the requirements adopted by the State Board of Medical Examiners of New Jersey for Class A Medical Colleges in force at the time such application shall be made."

Section 8 provides, "Nothing in this Act contained shall be construed as applying to any school conducted for the sole purpose of training persons to practice midwifery or chiropody."

The Secretary of the Board of Medical Examiners testified that he knew of no resolution adopted fixing requirements of a Class A Medical College, but that, the grading for such medical college which is accepted by the board is the one promulgated by the Committee of Education of the American Medical Association.

The prosecutor contends that prosecution under the Act would not lie, until requirements for Class A Medical College were formally adopted.

No doubt the legislature has the right to license medical schools and colleges and to make compliance with given standards of instruction a condition precedent to granting of license. But the prosecutor argues in as much as the legislature has seen fit to provide for the licensing of chiropractors (practitioners in a limited branch of medical practice) without requiring of them a knowledge of all branches of the medical practice, it is an unreasonable and arbitrary regulation to demand that a college for the education and training of students in order to qualify them to become chiropractors should be required to teach all branches of medical practice. Such a requirement, it is argued, is not regulatory but unreasonable. This is an argument properly addressed to the legislature and not to the courts.

Where that which is directed to be done is within the sphere of legislation, and the terms used clearly express the intent, all reasoning derived from the supposed inconvenience, or even absurdity of the results, is out of place, *Douglas v. Freeholders of Essex Co.* 38, N. J. L. 216.

To use the words in the Attorney-General's brief:

The act of 1924, Page 395, seeks to establish an educational standard for those schools or colleges proposing to train and qualify students to practice medicine and surgery or any branch thereof. The act, therefore, directly affects the qualifications and fitness of those who treat any physical ailment, regardless of the method advocated or used. This applies to those who practice chiropractic. They should be required to meet the educational standard adopted by the legislature, and thus protect the public from incompetent and unfit persons in the use of this particular method of treatment.

The requirements of the act of 1924 are therefore just and reasonable regulations. They in no way prohibit the prosecutor from conducting its business in this State. It merely imposes certain conditions which the prosecutor, in the conduct of its school, must comply with.

This, the legislature had a legal right to do and the act, therefore, does not offend against any constitutional provision.

The conviction of the defendant is proper and should be sustained.

The judgment of the First District Court of Newark is therefore affirmed.

Current Events

AMERICAN COLLEGE OF SURGEONS

President Martin's Inaugural Address
Boston Session, October 8, 1928

(We were unable to attend the recent convocation and cannot now present a report of the proceedings, but an advance copy of the inaugural address, delivered by the President, Dr. Franklin H. Martin, contained so many items of value to all members of the medical profession that we take advantage of the opportunity to abstract that address for our readers. The entire article is too long for reprinting in these columns but the following passages give a comprehensive idea of the whole):

Those who visualized the American College of Surgeons, organized it, and have been responsible for its administration, realized from its inception that just to organize another surgical association, just one more academic society, was not a reason to warrant its creation. The College, to justify its existence, would have to assume the responsibility of building for broader science, for more worthy practice, for interest in sustaining the traditions of the greatest profession; and by the example of its Fellows and through open discussion, impress upon the public the significance of scientific medicine as THE ONE AUTHORITY qualified to maintain the health, and insure the wholesome living of all people.

It was a bold announcement—the declaration by the Founders of the College at its inception, that not only would the standard of surgery be elevated, but the public would be admitted into the confidence of the profession, and the aid of the public solicited to accomplish the ambitious program of the College. Conservatism and conven-

tionalism, within and without the profession, asked in astonishment: "Is it possible that this group of men is actually serious in advocating so revolutionary a program?"

On this the fifteenth anniversary of the existence of the College, I dare to say the profession and the laity in the United States and Canada are prepared to answer that query in the affirmative, and to acknowledge that the American College of Surgeons is fully justified in assuming that its leadership is recognized, not only as progressive, but safe.

Among the learned professions, medicine has no equal in longevity, in continuity, in ideality, in disinterested service, and in accomplishments. For twenty-five centuries, medicine exhibits a clear history. Its spiritual and moral creed—the Hippocratic Oath—announced at that early beginning, has been and is as fundamental in the guidance of the true physician as the Sermon on the Mount (first uttered five hundred years later) in the guidance of the true Christian. Spiritually, morally, and scientifically, in all civilized countries scientific medicine is outstandingly the recognized authority in the prevention and cure of disease. Like the great religions of the world, it recognizes no geographic bounds, but unlike the great religions, it has no division of authority.

Ours is an unique heritage from a most ancient and accomplished profession. Are we, as trustees, doing our utmost to perpetuate and extend these doctrines? Is the public unmindful of its legacy through ignorance, indifference, or false teaching? Whose is the paramount responsibility to supplant ignorance with knowledge, indifference with interest, and false teaching with truth? The practitioners of medicine themselves!!!

In my review I have endeavored to ascertain what would be the result if the doctrines of scientific medicine were applied in a maximum degree toward the conservation and preservation of personal health, and toward the alleviation and cure of existing disease. It must be obvious that the effect in prolonging life would be phenomenal; and in extending wholesomeness of living, and happiness in pursuit of life, inestimable. Our past and present methods have confined our activities to curative medicine, almost to the exclusion of preventive medicine.

Though it be impossible to speak with exactness, it is a safe assumption that of the 130,000,000 people in the United States and Canada, one-half of those of reasoning age have no familiarity with the simplest fundamentals of the laws of health. While this proportion of our population is ignorant of the importance of health laws, it is again a safe assumption that false teachings by propagandists, and one or another reasons have led at least another one-fourth of our reasoning population to develop a positive antagonism to scientific medicine, and definite resistance to its services. Those who oppose scientific medicine thrive more or less successfully according to the advertising zeal of their leaders; they represent the various sects, cults, and organizations of proprietary and patent medicines.

If it is true that one-fourth of our population of reasoning age represents active opposition to curative medicine, and succeeds in avoiding its ministrations, here is a sound basis on which to estimate the effect of this on the health and mortality of the whole population.

Thus our favorable showing is possible with

non-resistance or indifference of one-half of the population of thinking age. Estimating that 1 of every 4 resisted the services of scientific medicine—refused vaccination for smallpox, antitoxin for diphtheria, and appropriate prophylaxis in the other preventable diseases—a large proportion of the present death rate in these diseases is avoidable and may be attributed to this resistance.

The remedy is but too obvious. There must be continuous education. The fundamentals of scientific medicine, its practicability and acceptability, should be taught in the primary classes of our public and private schools, as early as the seventh or eighth grades. The fundamental principles of scientific medicine should occupy the same relative position of importance in the grade schools as grammar, general and physical geography, lower mathematics and English literature. The influence of these principles on personal and public health should be emphasized and reiterated, and knowledge imparted of the laws of general hygiene and sanitation.

A number of experiences in addressing school children convince me that education in the basic principles of scientific medicine would be accepted by them with great enthusiasm; and the leaven there sown would be of incalculable aid in lessening the existing ignorance and indifference toward the maintenance and promotion of better health. Moreover, in a dignified and proper manner it would be a potent factor in combating misinformation, which, uncurbed, develops into opposition to the truths of scientific medicine.

The five million men who served in our armies in the Great War were quick to appreciate the importance of the policy of our medical department to KEEP THEM WELL. The demonstration in the armies of our allies and enemies was even more impressive, as their men were under scientific medical surveillance for longer periods. So astounding were these demonstrations that practically every country engaged in the Great War (excepting of course the United States) was forced by public opinion of their soldiers to add to their respective cabinets a portfolio on medicine, under whose supervision curative medicine was made accessible to all people.

PERIODIC HEALTH EXAMINATIONS

Preventive medicine and its counterpart, periodic health examinations, have been discussed since the earliest days of medical science. If scientific medicine has established its right to assume the responsibility of supervising and maintaining the health of the people, it is a foregone conclusion that it should examine each and every individual at definite intervals, and give advice based on the findings.

Resistance to this obviously significant policy is a sin of omission, due, primarily, to the shortsightedness of the physician who is educated in and practicing scientific medicine, and, secondly, to indifference of the public which is the beneficiary of such a policy.

Special semi-public organizations, conspicuously the National Tuberculosis Association and the American Society for the Control of Cancer, the former 24 years ago, the latter 16 years ago, began to urge periodic health examinations so that the signs of the respective disease in which they were interested might be discovered early; and later their example was followed by the American Child Health Association, the American Social Hygiene

Association, the American Heart Association, et cetera. Naturally it soon became obvious that preventive medicine could be more systematically advanced if the public were educated to accept a comprehensive periodic examination that would reveal the early signs of any disease instead of some particular disease.

The Great War emphasized the wisdom of thorough physical examinations, as every country which entered the conflict arbitrarily exacted a medical examination of its soldiers. In some countries the examinations may have been too hastily and too superficially carried out, because of the rapid development of the conflict. But the United States, with its greater deliberation, included in its draft law a provision by which every soldier underwent a health examination conducted, not by one physician alone, but by a group of specialists.

This, no doubt, was the most impressive demonstration, and certainly the most extensive one, on the value of a comprehensive health audit of a large group of apparently healthy men.

The medical corps of the Army, under General Gorgas, alone accepted for service, medically, 4,500,000 of these fit men; and to secure this number it was necessary to examine approximately 7,000,000 young men. The difference in these figures represents those who were unfit.

A SOLUTION FOR THE PROMOTION OF SUCCESSFUL HEALTH EXAMINATIONS BY THE PERSONAL PHYSICIAN

In obtaining thorough health examinations, how can we insure the independence of the family doctor, the personal internist, and the favorite surgeon? How insist upon a thorough and complete health audit, save the public from the exploitation of unworthy groups, stock companies, or even the well organized clinics or well equipped dispensaries or hospitals, and yet not lose to the personal physician his control of his own legitimate clientele? On this point even the exponents of the health audit have been most apprehensive, and their consternation has led them almost to the point of abandoning the program, lest in spite of its advantages the independent practitioner be put out of business.

The American College of Surgeons is successfully working out a remedy, a supremely practical solution of the problem, that will be satisfactory equally to the laity, the independent practitioner, public health officials, and the hospitals. Obviously, the difficulty lies in the fact that no one practitioner, regardless of ability and eminence, can individually overcome the prohibitive difficulties and make a complete health audit, unless he has at his command competent aids, and intricate scientific apparatus and laboratories.

Where is the environment that will remedy this difficulty? Where do Barker, Charles Mayo, Christian, or Cushing find satisfactory surroundings? The answer: In well organized groups; organized clinics; *the standardized hospitals*. Which of these could, without prohibitive confusion,

furnish to the independent physician a place where he could personally make a comprehensive scientific examination of his patient, retain his independence, and not lose control of his own business? A little consideration will answer this query in favor of *the standardized hospital*.

THE HEALTH INVENTORIUM

The "Health Inventorium" is planned by the College to meet this exigency. The suggested plan was submitted to one-tenth of the 1805 hospitals in the United States and Canada on the approved list of the College in 1927. Almost without exception the plan was accepted. Thereupon, the plan was submitted to all hospitals on our approved list in 1927, and finally there is a thorough discussion of the subject at our hospital conference during this session of the Clinical Congress. The fundamentals of the plan have met with almost unanimous approval.

The detailed plan can be summarized but briefly in the time here at my disposal. It is as follows:

1. Every standardized hospital shall furnish an examining room or rooms, to which any legalized practitioner, who is a member in good standing of his respective county medical society and the American Medical Association, may bring a patient for examination. There shall be no charge for the examining room.
2. The hospital shall furnish to the practitioner every facility in the way of aids, consultants when necessary, laboratory tests, etc., as will insure a comprehensive audit of his patient's condition.
3. The charge for the required laboratory tests shall be nominal, and a maximum of actual cost.
4. The physician shall render to the patient a bill covering his fee for the examination, and where there is a charge for laboratory services, he shall be responsible to the hospital for its payment.
5. No hospital shall accord these facilities to any individual who is not accompanied by his or her doctor, or who does not carry a letter from his or her doctor in which certain services are requested.
6. An individual who applies for an examination and who has no physician should be referred to a duly appointed, disinterested committee consisting of a representative or representatives of the county medical society and the standardized hospitals of the community, and this committee shall advise the patient in the selection of a physician.
7. Except in dire emergency, no hospital shall treat a patient who was examined in the Health Inventorium, except by request or consultation with the referring physician.

FINAL SUMMARY OF OUR INTERPRETATION OF THE FIGURES OF THIS INCONCLUSIVE SURVEY AND RESEARCH

(a) Estimated number of periodic health examinations of apparently healthy individuals—in 1920, 5,000,000; in 1927, 20,000,000; (b) One-third of the deaths in 1925 (502,083 deaths) are attributable to degenerative diseases of middle life and old age; (c) Degenerative diseases manifest themselves at average age of 45 years; (d) 236 replies from eminent internists, and 18 replies from general practitioners, indicate yearly examinations would modify and postpone the degenerative dis-

eases, and increase longevity and the maximum old age limit; (e) 35% of apparently well individuals receiving periodic health examinations are found to harbor some form of unsuspected disease or physical defect; (f) 90% of our replies from internists and outstanding clinics reveal that patients are advised to submit to periodic health examinations; (g) Labor in industry, employees in governmental and civic organizations, pupils in elementary and secondary schools, colleges and universities, practically all receive and welcome some form of periodic supervision, advice and service, and at least an additional 17,500,000 receive complete periodic examination service; and an estimated additional 3,000,000 men and women, not included in the above, brings the grand total to 20,500,000.

The above figures, while not conclusive, indicate the enormous interest that is developing in the subject of periodic health examinations. However, this is not a guarantee that all of these examinations now are to the highest degree comprehensive and efficient. The figures do indicate the lay public's receptivity to this important innovation. And their acceptance of the ministrations of scientific medicine places upon the profession a responsibility that should induce us to give a one hundred per cent service.

THE INFLUENCE OF THE PHYSICIAN IN GAINING CO-OPERATION OF THE PUBLIC

A mistaken policy of silence, and a tradition of non-communicability in discussing the health problems of our patients, has militated against our full influence with the public. No profession, not even the ministry, can more effectually guide a large proportion of the community on a private or public policy. When we fail to exert this prestige, it is the fault of our profession and not of the public.

Change of opinion has been wrought in the minds of the laity, in their attitude toward the relative wisdom of periodic audits to preserve health, rather than to wait for illness to make evident a possibly incurable condition. A wholesome evolution in the practice of medicine is resulting, and it promises to become a boon that will preserve personal health to the maximum degree, and afford satisfaction to the scientific practitioner of medicine because of ability to practice his profession with greater precision and success.

It is my wish that this review may aid to convince the people that one-half day each year should be set aside for a comprehensive health audit of each member of every family. As physicians we know the essentials, and the details of scientific medicine. We believe that the layman and woman from childhood should have a convincing knowledge of the essentials of preventive medicine. This knowledge must be imparted by dignified publicity methods; by teachers who are educated physicians. If this reasonable program is accepted and acted upon (and the present attitude of the people indicates that it is being accepted and adopted), I predict that our estimate of longevity will show an increase from 58 years in 1920, to 65 years in 1930, and what is of greatest importance, a decrease in preventable illness that will add immeasurably to the wholesomeness and happiness of more than 100 millions of people in the United States and Canada.

Lay Mirror Reflections

APPEAL IS LOST BY OSTEOPATH

State Education Board Upholds Hasbrouck Heights in Removing Him

(Newark Evening News, October 6, 1928)

That an osteopath is not a physician within the meaning of the school law, as held by Dr. Charles H. Elliott, commissioner of education, in the case of James E. Chastney, was upheld by the State Board of Education at its meeting today.

Mrs. Bertha Shippen Irving of Camden, a member of the law committee of the board, dissented from this view.

Chastney was removed as medical inspector by the Hasbrouck Heights Board of Education on the ground that he was not a physician. He appealed first to Commissioner Elliott and finally to the state board.

BAR AND MEDICINE MOVE TO CORRECT "EXPERT" EVIL

(Newark Evening News, September 9, 1928)

Decision by the State Bar Association to father a bill designed to correct abuses in the presentation of expert testimony culminates several years of discussion in both the legal and medical fraternities of New Jersey. Tentative steps hitherto have been taken toward correction, singly and in cooperation. One definite step begot a bill that failed of adoption.

The purpose of such a law is to eliminate, where possible, the conflict and bias engendered by employment of experts by parties to a civil suit, or by defense and prosecution in criminal cases. So widespread has become public lack of confidence in such testimony, especially where sanity issues enter into notable murder trials, that outspoken criticism has resulted in the adoption by a number of states of laws similar to the one proposed here. The Baumes Crime Commission in New York has placed the subject on its agenda for consideration of further legislation affecting the crime laws of that state.

The bill to be offered at Trenton would give the court, at its own option or on motion of either side to a cause, power to name experts whose services would be commanded and compensated by the public authority. It would not restrict employment, by either side, of other experts; but where these were used would provide court and jury with balancing advice, removed from the possible bias of partizan affiliation, and forbidden to accept compensation for the services rendered from any but the public source.

Arbitral authority, whether judge, jury or referee, necessarily has but lay knowledge of many things which enter into judgment in all departments of the administration of justice. Even where good faith is preserved on both sides, conflicting expert testimony frequently presents puzzles which the deciding authority is not qualified to construe.

In such cases experts retained by the court would provide a guide to sound judgment, while

in those too frequent other cases, where technical witnesses are open to the suspicion of being biased toward the sources of their fees, they should prove invaluable. Moreover, the court's power to retain such services on its own motion may often further impartial justice where a defendant or one party to a suit is not financially able to employ experts.

The ideal toward which such legislation tends is eventual elimination of the partizan-employed expert. It can be realized, perhaps, if such a law as the Bar Association, with the support of the Medical Association, now proposes is rightly used by the courts of the state.

THE DOCTOR AND OLD AGE

(New York Times, October 3, 1928)

While old age is not preventable, its years are as inevitable as the "inevitable hour" which all alike await. But a significant symposium at the Academy of Medicine is considering the question—one which has probably never had such emphasis before by the profession—how the pathology of those who are old in years may be postponed or altogether avoided. Despite sanitary and medical science, it appears that the maximum span of life has not been lengthened much if at all. And perhaps with all that man can do he may not live beyond the limit fixed by the "predestination of heredity." What he can do is to lengthen somewhat the life of more individuals within that limit, and assure a more comfortable and efficient mental, moral and physical existence.

What the layman wishes to know, as Dr. George E. Vincent said in his brilliant address at the opening of the symposium, is "can an average man or woman of 65 or 80 hope to be fairly fit, reasonably alert and of some use to the community, or is it only the exceptional person who may entertain that hope and reach that standard?" What has been accomplished so far has been in the groups under 40 and especially under 50. That has been a remarkable achievement, but a pretty large minority of the race is now much concerned about the years that lie beyond.

A change is needful in the attitude of doctors toward the old people with whom they have to do and in that of the old people toward themselves. They are not to be thought of simply as bodies that have to be patched up by the doctors when there is a disorder or distemper here or there, but as persons with the characteristic powers of old people who have "a significant contribution to make the common welfare." The doctors must of course give attention to the healing of ills, but they should have the more positive function of trainers to keep even the old fit. To use Dr. Vincent's simile:

Doctors ought to be like the mechanics who take contracts to keep clocks going and on time, rather than emergency men to be summoned when timepieces stop or are too fast or too slow.

Men have written and talked about old age from Cicero to Osler, but "gerontology" is now coming for the first time to make a place for itself in the science of human health. This symposium is a significant sign of the concern that is taken not in finding springs of youth but in helping those who "would be well old to be old betimes" in the thought that they take of keeping themselves fit.

The Woman's Auxiliary

As previously reported, the Woman's Auxiliary to the Medical Society of New Jersey has already established one notable record; i. e., it was the first to achieve a complete organization in the sense of having a branch formed in every county of the state. While proud of that achievement, we realize that it is not to be boasted about too strongly because in some of our counties the organization is merely a formal one and much remains to be done ere they will be active and important factors in this great movement. Furthermore, few, if any, of our county auxiliaries have yet gotten down to serious work, and until a definite program of work has been determined and each branch of the organization is actively engaged in its promotion, we shall not have justified our existence.

The next record to strive for, therefore, is that of having a perfected organization, capable of functioning as a unit when necessity arises and steadily engaged, in state and counties, in promoting the interests of the medical profession. We cannot consider any county auxiliary properly organized until it has enrolled at least a major portion of the eligible women of the county; certainly not until every such eligible woman has been given full opportunity to accept membership. The county medical society endeavors to include among its members all of the eligible physicians of that locality, and it is our desire that every member of the medical society shall be represented in that society's auxiliary by some feminine member of his family—wife, daughter or mother; the rules also provide that the widows of former members of the medical society may be considered as eligible to membership in an auxiliary, and, already, some of our most earnest members have been chosen from that group of eligibles. Mere numbers will add very materially to our strength in some of the work that lies ahead. Let us, then, make an effort this winter to perfect the organization by bringing into the fold as many members as possible.

Each and every auxiliary in the state—save only 1—may well undertake a membership drive, as its most important piece of work (demanding immediate attention. It was reported in June that the Woman's Auxiliary to the Cape May County Medical Society had enrolled all but one of the eligible women in the county, and adherence of the last one was being sought. That county has set an example worthy of emulation. How many counties will match the record before the next Annual Meeting of the State Society Auxiliary, in June 1929? It is not beyond the range of possibility for 20 other county society auxiliaries to accomplish this same feat; it only requires some activity on the part of their officers, properly supported by the body of present members. Each member can induce some eligible neighbor to come in. The president and secretary of the county auxiliary can, with the aid of the secretary of the county medical society, easily prepare a list of all the eligibles in the county. Then, by parcelling these names among existing members—perhaps on the basis of acquaintanceship—let an earnest effort be made to induce the desirables to join the organization; by use of the telephone, social calls, or letters, it should be feasible to cover the local territory within a month.

A drive for increase of membership is the first and most important task now confronting our society auxiliaries. Lend the movement your active support, that we may make a record of full membership.

Now, as the new fiscal year opens, there are other records and prizes to strive for. One of the first requests made of the women's auxiliaries by the American Medical Association was, that every possible effort should be made to extend the subscription list of the health magazine "Hygeia". Some of our county auxiliaries—Camden County, most notably—did last year place a goodly number of subscriptions and thus helped toward the financial success of that magazine, and also helped to spread sound health doctrine in the community. It should be our pleasure to promote the widest distribution of "Hygeia" and each county auxiliary may well consider ways and means of accomplishing this object. As friendly rivalry often stimulates activity in an affair of this kind, the American Medical Association last year ordered a prize of \$50 to that county auxiliary which secured the largest number of paid subscriptions to "Hygeia" within a specified time. The prize was won by the Woman's Auxiliary to Cass County (Missouri) Medical Society, and in the August issue of that state's Medical Journal we read that their success was attained in the following manner: "We first raised sufficient funds by a benefit bridge party to place 'Hygeia' in all of the schools in the county; then in as many homes as we could. During one week we had window displays in many stores, and committees appointed to take subscriptions. We then created an interest in purchasing 'Hygeia' subscriptions as Christmas gifts. Finally, each member pledged herself to bring in at least 3 new subscriptions."

To still further advance the sale of "Hygeia", and to stimulate competitive activity among the auxiliaries as to which can do the most to favor the success of this great factor in public health education, an interesting announcement was made at the recent A. M. A. Convention in Minneapolis, when Mrs. John O. McReynolds, of Dallas, Texas, President of the National Auxiliary, said: "We have just recently been offered a prize by one of the friends of the auxiliary to the state that sends in the first 1000 subscriptions to 'Hygeia'. That auxiliary will be presented with an automobile or a Mediterranean Cruise, and the auxiliary will be expected to present the prize to the individual member who secured the largest number of subscriptions making up that thousand."

Here is a prize worth working for. Will some energetic and enterprising auxiliary member bring this automobile to New Jersey? When we think of the present crowded condition of our highways, we are inclined to hope not—despite our wish to have the prize won by a resident of this state—but we can hope that one of our auxiliaries may earn the prize and then accept the sea voyage. Let's try for it!

Now, before presenting you with the separate county reports of recent meetings, let us quote a few more reasons why doctors' wives should be members of and participate in the work of the county society auxiliaries. The Journal of the Kansas Medical Society (October, 1928, page 340) has this to say: "Now that the activities of the county societies are being resumed it is time to give a little consideration to the auxiliary. The wife of the doctor, if she is willing to be and is

permitted to be, is a business asset not only to her husband but to the medical profession. In a majority of instances the social standing of the doctor's wife gives her sufficient prestige to enable her to advance the cause of scientific medicine among those who are most likely to dictate the sort of attention the illnesses of the family shall have. She occupies a strategic position between the medical profession and the public and can easily locate adverse influences and opposing forces.

The conjoined efforts of the wives of the members of the medical profession can accomplish a great deal for us in our campaigns for better sanitation, for universal protection against contagious diseases and, what is of most interest to us at this time, in our campaign for better legislation."

To which we say, "amen", and ask you to use this argument for the purpose of bringing your neighbor into auxiliary membership.

Bergen County

Reported by Mrs. Edward W. Clarke

The October meeting of the Woman's Auxiliary to the Bergen County Medical Society was held on October 9 at the Heigh-Ho Tea Shop in Hackensack where 18 of the doctors' wives gathered for luncheon.

A brief business meeting followed, at which the president, Mrs. Edward W. Clarke, presided.

The ladies then adjourned to the Christ Church Guild House, to join a mammoth benefit card party for the Hackensack Hospital. Much enthusiasm was shown at this, the first fall meeting of the year, and one new member was enrolled.

Gloucester County

Reported by Mrs. H. B. Diverty

Considerable interest was evinced in the season's initial meeting of the Auxiliary at the Woodbury Country Club, Tuesday, October 18. Plans for the year's work were discussed and it was decided to endeavor to enroll as soon as possible 100% of the eligible members in the county. As a means of self education in medical and medicosocial matters it was determined to devote some meetings to a reading and discussion of such recent books as: Medical Follies, by Fishbein; The Human Body, by Clendenning; The Doctor Looks at Marriage and Medicine, and The Doctor Looks at Love and Life, both by Joseph Collins.

Dr. Emma Richardson, of Camden, addressed the meeting on the subject of "Medical Ethics".

Later, the members accepted the invitation to join with members of the County Medical Society for a social hour and tea.

Passaic County

Reported by Mrs. G. E. Tuers

The October meeting of the Woman's Auxiliary to the Passaic County Medical Society was held in the Health Center Building, October 11, with 20 members in attendance.

Election of officers for the ensuing year resulted as follows: President, Mrs. A. Schultz; First Vice-President, Mrs. J. P. Morrill; Second Vice-President, Mrs. William Neer; Treasurer,

Mrs. A. Shulman; Secretary, Mrs. L. Shapiro; Delegates, Mrs. G. E. Tuers and Mrs. William Thorne; Alternates, Mrs. William Spickers and Mrs. T. A. Clay.

A report of the state auxiliary meeting was given by Mrs. Andrew F. McBride.

Certain phases of work being done in this county for children handicapped by physical defects were discussed by Mrs. O. R. Hagen.

The meeting then adjourned so that members might accept the invitation to meet with the county medical society where addresses were being delivered by Dr. J. Bennett Morrison and Dr. Andrew F. McBride. At the conclusion of this meeting, a social hour was enjoyed and a splendid collation was served.

Somerset County

Reported by Mrs. D. S. Renner

The Woman's Auxiliary to the Somerset County Medical Society held its annual meeting at the Raritan Valley Country Club on Thursday, October 11, with 14 members present. Regular business was transacted and the following officers were elected for the coming year: President, Mrs. Dan S. Renner; First Vice-President, Mrs. David F. Weeks; Second Vice-President, Mrs. E. G. Brittain; Recording Secretary, Mrs. Lancelot Ely; Corresponding Secretary, Mrs. Josiah Meigh; Treasurer, Mrs. Edgar Flint, Board of Managers, Mrs. C. R. Kay and Mrs. A. L. Stillwell.

A report of the State Auxiliary meeting held at Atlantic City in June was read by Mrs. Stillwell.

Mrs. Lancelot Ely suggested that the auxiliary aid the County Medical Society in its work of making the state and county free from diphtheria, by urging parents to have their children immunized.

The members were urged to read the auxiliary items in the State Medical Journal, to keep informed of the activities of other county auxiliaries.

After adjournment the members joined the County Medical Society in its annual dinner.

Union County

(Report sent in by Dr. Shirrefs)

Mrs. Fred A. Kinch, of Westfield, was re-elected President of the Woman's Auxiliary of the society at the last meeting at Overlook Hospital, following a day of golf and cards and a dinner. Members attended from every municipality in the county. One of the features of the meeting was an address by Dr. T. P. Prout.

It was stated that with regard to the auxiliaries, New Jersey has 100% organization. Mrs. George Orton, of Rahway, the State Auxiliary President, was among the guests, speaking on "Our Work, Past, Present and Future". Reports of May meetings were presented by Mrs. Meta P. Shirrefs, of Elizabeth, and Mrs. H. V. Hubbard, of Plainfield. The report of the nominating committee was presented by Mrs. James M. Hanrahan, of Elizabeth. The officers, unanimously elected, follow:

President, Mrs. Kinch, Westfield; Vice-President, Mrs. P. B. Cregar, Plainfield; Second Vice-President, Mrs. V. W. Currie, Plainfield; Secretary, Mrs. Hubbard, Plainfield; Treasurer, Mrs. D. R. McIlhinney, Elizabeth; Trustees, Mrs. J.

H. Runnells, New Providence; Mrs. Charles H. Schlichter, Elizabeth, and Mrs. T. R. Prout, Summit.

New members enrolled were Mrs. T. B. Prout, Mrs. H. H. Bowles, Mrs. G. W. Disbrow, Mrs. R. D. Baker and Mrs. C. B. Kenney, all of Summit; Mrs. F. L. Foster, Cranford; Mrs. Carl Bishop, Plainfield; Mrs. Alden R. Hoover and Mrs. Hanrahan, Elizabeth.

Dr. Prout spoke of the great plagues of typhoid, tuberculosis and diphtheria and their conquest by man. He said disease, poverty and hatred are the three sinister influences in social life.

A rising vote of thanks was given the Summit members for arranging the meeting, the various features of the day and in having Dr. Prout speak.

Warren County

Reported by Mrs. Paul F. Drake

The Woman's Auxiliary, in conjunction with the Warren County Medical Society, met at Hotel Belvidere, Belvidere, N. J., Tuesday, October 16, at 11 a. m., Mrs. Lawrence H. Bloom presiding.

Mrs. Frederick C. Roberts, of Easton, Pennsylvania, spoke on "The Problems Confronting a New Auxiliary Society".

The guests were: Mrs. Frederick C. Roberts, of Easton, Pennsylvania, and Mrs. Ephraim R. Mulford, of Burlington, New Jersey.

After the business meeting, the auxiliary had dinner with the Warren County Medical Society.

During the afternoon, the members enjoyed a visit to the home and private museum of Dr. and Mrs. George Wyckoff Cummins.

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M.D., Reporter

The Atlantic County Medical Society held its regular meeting at the Hotel Chalfonte on October 12, 1928. Dr. Charles B. Kaighn presided in the absence of President William C. Wescott who was abroad at the time.

The minutes of the previous meeting were read and accepted without correction. Communications were received from the American Medical Association regarding the standing of members of the staff of the Atlantic Sanitarium Holding Company. Communications were also read from Senator Walter E. Edge regarding the deduction of expenses for doctors attending medical conventions, and also regarding the proposed raise in narcotic fees. Mr. Edge informed us that it would be impossible to get any deduction in traveling expenses due to the fact that these meetings were for an educational purpose from which the doctors would receive fees as a result of the information gathered. He further assured us that there would be no raise in narcotic fees.

Dr. Samuel L. Salasin gave a brief talk on the support of the state-wide campaign for the immunization of children against diphtheria. The society went on record in support of Dr. Salasin's motion.

The first paper of the scientific program was delivered in a very interesting style by Dr.

Robert A. Kilduffe, who spoke on "Tularemia", giving the history of the disease, bacteriology, types of infection, symptomatology, and treatment.

The final paper of the evening was read by Dr. David R. Bowen on the subject of "Massive Collapse of the Lung". The paper included a wealth of interesting material that Dr. Bowen had collected from various papers that he had written for different roentgenologic societies. His paper was discussed by Drs. Kaighn and Walt P. Conaway.

The meeting was adjourned at 10:45 p. m.

Atlantic City Hospital Staff

Joseph H. Marcus, M.D., Secretary

The stated monthly meeting of the Atlantic City Hospital Staff was held in the Nurses' Auditorium, September 21, 1928. The meeting was called to order by President D. Ward Scanlan.

The scientific program was presented as follows: Report of Gynecological Service by Drs. William Edgar Darnall, Chief, and E. F. Uzzell, Associate.

Dr. Edward F. Uzzell, Associate, detailed the statistics for the months of April, May, June and July, 1928. The total number of admissions was 77 with 69 operative cases. Dr. Uzzell concluded his reports with a discussion of the mortalities and morbidities detailing at length the important symptoms and subsequent course of the 4 mortalities. There were 2 cesarean sections performed for extrauterine pregnancy.

Dr. George Lambert, resident physician, outlined 2 cases of cesarean section.

Dr. William E. Darnall sketched his service which included a period of 4 months. He expressed his appreciation of the willing and satisfactory contacts of the various services and stressed the extreme advisability of maintaining a line of demarcation between the specialized services. He lauded the service of his associate, Dr. Uzzell, for his able assistance, and for so well supervising the wards and emphasizing the completeness of the pre and post operative procedures.

Following a general discussion of the case reports presented, the meeting adjourned.

BERGEN COUNTY

Spencer T. Snedecor, M.D., Reporter

Dr. Joseph R. Morrow was host, at the Bergen Pines County Hospital, to the October meeting of the society.

Dr. S. T. Snedecor, for the Public Relations Committee, outlined the plans which they had formed. The public education campaign will have 2 parts. The first will be indirect advertising in the form of bi-weekly releases to all of the county newspapers, on general medical topics. These will be published under such a title as "Bergen County Medical Society". From various other societies, particularly those of Toledo, Minnesota and Wisconsin, we have obtained a considerable number of suitable topics. The second part will be direct paid advertisements. They are awaiting the formation of the details of copy and circulation from Mr. V. C. Pratt who has had a large experience in general medical advertising. We hope to be able to start this campaign in about a month with complete

copy prepared to carry on for a period of 6 months. This report was approved.

Dr. William E. McIlvaine, Chairman of the Entertainment Committee, proposed that the annual dinner be held at the Ridgefield Park Elks' Club, on October 23. All arrangements have been made for entertainment and a suitable menu. The officers of the State Medical Society will be invited. Dr. J. B. Lansing, of Tenafly, will be the guest of honor.

Dr. Chester King, of Oradell, reported on the affairs of the Knickerbocker Adjustment Company. Mr. Foster who formerly solicited accounts for this company, had called upon him and given him additional details. He has engaged Mr. Joseph Gaudielle, of Hackensack, as attorney for the society. Mr. Gaudielle advises that the firm has not lived up to its contract and that all physicians with such accounts shall send him a list of them so that he may proceed against the company. Dr. King added that he had written a letter to Dr. William J. Carrington, of the State Society, about this matter.

The Antidiphtheria Campaign was discussed. It was urged that the medical men of Bergen County take the lead locally in this work which is state-wide in scope. It was felt that the doctors should make every effort to promote the antidiphtheria work by urging their patients and friends to help. The men also feel that while free clinics are all right for indigent cases, those who can pay should go to their family physicians. The proposal for a fixed fee was discussed but not acted upon.

The speaker of the evening was Dr. William Dieffenbach, President of the Community Hospital of New York. He was introduced by Dr. Herman Trossbach and spoke on "The Relation of Foods to Disease". Newer discoveries in the vital properties of food play an important part in the treatment of disease, such as the use of liver in pernicious anemia. Dr. Dieffenbach described the need of vitamins in the convalescence diet. In children, he referred to the importance of acidosis and the careful study needed to secure the proper balance between the alkaline and acid residue. Pasteurization of milk and its effect upon the vitamins as well as a comparison of Grade A and B milk was made.

Supper was served by the staff of the hospital.

Annual Dinner of the Bergen County Medical Society

The convivial spirits of this society, 80 odd in number, celebrated the passing of another year at their Annual Banquet at the Ridgefield Park Elks' Club. The program arranged by Dr. William E. McIlvaine, of Ridgefield Park, and Dr. Halperin, of Englewood, showed what success can be made of a stilted group of antiquated physicians when the proper inducements and stimulants are at hand. The officers of the State Society complimented the society even to expressing the wish that we would put on 2 a year.

Dr. Ephraim R. Mulford, President of the Medical Society of New Jersey, addressed the members on the importance of periodic health examinations for themselves; the efforts of the State Society to put across the antidiphtheria campaign, to feature the inoculation in the doctors' offices and not in clinics; and the importance of developing the State Society's general educational program.

Introduced by President McCormack as the finest Secretary any state medical society ever had, Dr. John B. Morrison described some of the practical benefits which the State Society offers to members. The new contract as offered by the Medical Protective Society he showed to be illegal and not advantageous to physicians. He urged that all physicians take advantage of the health and accident policies as offered through the State Society; the rates are low; policies are non-cancellable and the returns so far have been more than satisfactory.

Bringing back from his quiet Parisian vacation several acceptable jokes, Dr. Henry O. Reik regaled the company in his best manner.

Dr. J. B. Edwards, of Leonia, introduced our honored member of the evening, Dr. James B. Lansing, of Tenafly, a practitioner for over 35 years in Bergen County. Dr. Edwards spoke briefly on his life from boyhood days to the full share which he has performed in carrying the health burdens of the Northern Valley.

Dr. Lansing's witty reply, with reminiscences of by-gone days and his associations with the other members of the profession is herewith appended.

BANQUET RESPONSE OF DR. LANSING

Brothers of the Bergen County Medical Society: First of all, I wish to thank you for the signal honor you have seen fit to confer upon me tonight. To be made an honorary guest and to be afforded an opportunity to disgorge an after dinner speech has been the gnawing passion of my life. When the late Mr. Depew was toastmaster at a banquet tendered the late Joseph H. Choate, he remarked in his introduction that all that was necessary was for Mr. Choate to cat a good dinner and "up would come a speech". Mr. Choate in his reply said that he differed from Mr. Depew in one respect, that if he heard one of Mr. Depew's speeches,—up would come his dinner. Now I hope that my speech will not have that effect upon you.

Whom the Gods wish to destroy, they first make mad. It has been my observation for 37 years that when the Bergen County Medical Society wishes to destroy one of its worn out and senile members, it fills him up at a gorgeous banquet and compels him to disgorge a speech. Sometimes it works and then again it does not. Right now, in all seriousness, I wish to say that during my 36 or 37 years as a member of this society, 31 of our members have passed on to, I trust, wider fields of usefulness. To me that means the severing of many warm professional and personal ties. To them, we as a society owe much for their devotion to its principles and its upbuilding of our professional standing in the community, and the guardianship of the public health.

When Dr. McIlvaine called me on the phone and revealed to me this plot, he said, "Now, doctor, we don't want a long history of your many wonderful achievements in scientific research and surgery, of your success in literature, etc.—that would take too long—but we want reminiscence and we know of no one who is better able to delve into the dim and shadowy past than yourself." So here I stand—a veritable totem pole. I would like to digress and give you a resumé of my wonderful surgical operations, but I must adhere to the schedule; but I cannot pass without claiming that I think I performed the first appendectomy in Bergen

County and, strange to relate, the patient is still living.

Reminiscence. We have had just one master mind in that specialty, our dear old friend the late Dr. Haring. On one occasion, when he was the guest of honor, he read his speech. After an hour and thirty minutes he looked up and could not see an open eye before him. He stopped reading, and promised that he would have the speech printed and a copy sent to each one of us.

On account of a failing memory, I shall not promise that the following will appear in chronological order: Many, many years ago when old Proctor F. A. C. S. was in his prime, I had occasion to call him up at 3 a. m. to help deliver the wife of a physician in Tenafly. I had labored for many hours and was completely exhausted—so was the patient. After what appeared several hours "Proc" turned up all smiles and started to wash up. He seemed to be doing a thorough job on those hands, but after he was ready and took hold of those forceps, I wish you could have seen him work. Well, between us, in relays we brought a living female child in the world, and I trust she has made her *mark*,—for she had enough of them to start with.

The first professional touch I had with Phillips was at a confinement at Haworth. Season—winter. Temperature—15° below. Time—2 a. m. High forceps—result, living child. I taught Phillips so much obstetrics that chilly night that he has never needed another lesson since. Val Ruch! That man has never sent me a normal case of confinement in his life. He can sense a complicated confinement at least 10 months ahead and immediately cuts for South or Florida and remains away until the baby is cutting teeth. I would not call him a coward, but he is too fond of other kinds of fishing. Dr. Bell takes the responsibility of *calling* G. H. Ward to Englewood. I never before heard that word used medically or surgically and the Lord knows that Ward is no Doctor of Divinity! I claim to have started Ward on his wonderfully successful career, for I showed him how to do one of his first mastoids. Subject—child 3 months old—place—Tenafly, in a dirty hovel. I gave the anesthetic and *supervised* the operation. Ward cut and chiseled, sponged and scraped. Finally, I said, "Ward, for Heaven's sake stop, you're going right through to the other ear." "Well there is pus here somewhere," he said, and the next tap the pus flew to the ceiling. A few days later at midnight the family moved out without disturbing anybody, to Long Island, and we both are still awaiting our checks.

Well, for 15 or 20 years, I have been trying to fight MacKellar, but he simply won't *fight*. He says what he thinks and that ends it. Years ago we formed a sort of partnership, specialty—uremic cases, invariably complicated by convulsions. We delivered, I think, 7 of such cases without loss of mother or child. Fortunately, there has been a dearth of these cases lately and we are satisfied. I can't say much for Alf Ward. I have kept him too busy operating on my own family to give him time for much else. But he did *heroic* work on one occasion when I sent for him. A long complicated confinement. Child apparently still-born. Ward worked over that child for fully ¾ hour, ere it began to breathe. It is still living, but is mentally and physically deficient.

Now, I don't want to go to the *expense* of having this printed like Dr. Haring. I can recall many

other, to me, interesting experiences in which many of you have figured, but it is getting late.

I wish to assure you that there never has been a time when I did not feel free to call on any of you members to assist me with your moral support or scientific skill. A few days ago, one of our younger members grasped me by the hand, and with a sympathetic expression in his eyes, said, "Dr. Lansing, how have you managed to live so long?" I replied that my rule of life has been "Know your limitations. Never scorn advice, and let the other fellow do the worrying". Once again, I thank you.

BURLINGTON COUNTY

R. I. Downs, M.D., Reporter

The ninety-ninth annual meeting of the Burlington County Medical Society was held at the St. Mary's Guild House, Burlington, New Jersey, on Wednesday, October 10, 1928. Following a splendid dinner the meeting was called to order at 2 p. m. by the President, Dr. Anderson. There were 19 members and guests present.

Dr. W. E. Rink, of Burlington, previously elected, signed the constitution. Dr. Walter Zwick, of Riverside, was introduced.

Drs. Ulmer and Hunter, as the Auditing Committee, reported that the Treasurer's report was correct, with a balance of \$285.15.

The Nominating Committee composed of Drs. Mulford, Rogers and Stokes presented the following names as officers for the ensuing year, and the candidates were unanimously elected: President, H. W. Bauer; Vice-President, S. E. Stokes; Secretary-Treasurer, George T. Tracy; Reporter, R. I. Downs; Censor, John Conroy; Delegates to the State Society, Howard C. Curtis and Joseph Kuder; Alternates, Harry L. Rogers and M. M. Schisler; Member of Nominating Committee of State Society, M. W. Newcomb; Members of Welfare Committee to State Society (appointed by President of State Society), D. F. Remer and George T. Tracy; Delegates to Camden County Medical Society, Charles S. Mills and D. H. B. Ulmer; Delegates to Atlantic County Medical Society, B. K. Brick and Edgar Haines; Delegates to Cape May County Medical Society, Alex. Marcy, Jr. and Nathan Thorn; Delegates to Gloucester County Medical Society, Eliz. F. Love and Emma W. Metzger; Delegates to Salem County Medical Society, E. W. Rodman and P. M. Scott; Chairman Section for Practice of Medicine for January meeting, R. D. Anderson; Chairman Section for Surgery for March meeting, Joseph Kuder; Chairman Section for Obstetrics and Gynecology for May meeting, Harry L. Rogers; Chairman Section for Specialties for July meeting, John Conroy; Chairman of open meeting in November, President of Society.

A letter from Mrs. Wells, Secretary of the Woman's Auxiliary to the Burlington County Society was read; the services of the auxiliary were offered and permission was asked to serve the local hospital where possible. The society voted appreciation of the letter and offer of services, and would cooperate with the auxiliary in every way possible.

Dr. Mulford spoke on this year's program of the State Society. He said that Dr. Conaway's program of last year would be continued. The diphtheria campaign is active through local committees in each county. We all need to aid the welfare committee in fighting vicious bills

that are becoming more serious all the time. The Woman's Auxiliary can aid in this work by influencing local women's and men's clubs on this subject. The physicians have not taken to the subject of periodic health examinations as they should. They must prepare themselves for this work or other organizations will take it over.

Following a discussion of the work of the welfare committee, a local committee composed of Drs. Conroy, Ulmer and Rogers was appointed to study the local problem and aid the welfare committee when possible.

Dr. Richard Anderson then read his President's Address. He read a biography of former physicians of Burlington County, from the first settlers through to the year 1900. (The paper was exceedingly interesting and will be forwarded for publication in the Journal shortly.)

The meeting adjourned to meet at the Burlington County Hospital in January.

CAPE MAY COUNTY

June Meeting

Aldrich C. Crowe, M.D., Acting Secretary

The regular quarterly meeting of the Cape May County Medical Society was called to order at 11 a. m., June 5, 1928, by President Herschel Pettit. The meeting was held at the Wildwood Golf Club.

Dr. Clifford Lull, of the Jefferson Medical College, spoke on "Toxemia of Pregnancy", and Dr. Robert Jester, also of Jefferson Medical College, spoke on "Nephritis".

Dr. Cryder, of Cape May Court House, was elected Vice-President to fill the vacancy caused by the death of Dr. Randolph Marshall, of Tuckahoe.

The business session was followed by a dinner. The meeting was very well attended but we were sorry to note that Drs. Eugene and Clarence Way were unable to attend.

October Meeting

Eugene Way, M.D., Reporter

The regular annual meeting of the Cape May County Medical Society was held on Tuesday, October 9, 1928, at 11 a. m., in the club house of Ocean City Golf Club, Somers Point. President Pettit presided and 21 members and guests were in attendance.

The following officers were elected for the year 1929: President, Herschel Pettit, Ocean City; Vice-President, Millard Cryder, Cape May Court House; Secretary and Reporter, Eugene Way, Dennisville; Treasurer, H. H. Tomlin, Wildwood; Censor for 3 years, Frank R. Hughes, Cape May; Permanent Delegate, Allen Corson, Ocean City; Annual Delegate, John Townsend, Ocean City; Alternate, Herschel Pettit, Ocean City; Member Nominating Committee of State Society, Clarence W. Way, Sea Isle City.

The Treasurer's Report showed a balance on hand of \$67.85. Announcement was made that Dr. Mulford, President of the Medical Society of New Jersey, had reappointed Dr. Clarence W. Way a member of the State Welfare Committee for the ensuing year.

The President then introduced Dr. Collier F. Martin, of the University of Pennsylvania, who gave an address on "The Symptoms and Diagnosis of Rectal Infection". The lecture was il-

lustrated by lantern slides and was interesting and highly instructive.

The President introduced Dr. Charles S. McGovern, of Atlantic City, who gave an address on "The Relation of Nasal Infection to Lower Respiratory Symptoms". Several new and important facts were brought out and the latest and most approved form of treatment outlined.

The Woman's Auxiliary also held a meeting which will be reported to the Journal by the Secretary.

The time and place of next meeting was left to the President.

Ocean City Medical Club

Aldrich C. Crowe, M.D., Secretary

The regular April meeting of the Ocean City Medical Club was held at the Golf Club. Dr. C. Eugene Darby spoke on "Accessory Sinus Infection" (paper to appear later in the Journal); Mr. John Friel spoke on "Laboratory Work of Interest to the General Practitioner". A buffet supper was served after the meeting.

The May meeting was held as a social gathering. The members with their wives attended the theatre in Atlantic City and went for a dinner and dance after the show. We always enjoy practically a 100% attendance at such gatherings.

CUMBERLAND COUNTY

E. S. Corson, M.D., Reporter

At the annual meeting of the Cumberland County Medical Society, held at Bridgeton, October 11, the following officers were elected: President, M. F. Sewall; Vice-President, Edwin H. Van Deusen; Treasurer, H. H. Wilson; Secretary, E. C. Lyon; Censor, H. G. Miller; Annual Delegate, Dare Woodruff; Alternate Delegate, Reba Lloyd; Permanent Delegate, Charles Wilson; Member Nominating Committee State Medical Society, Alfred Cornwell.

The society observed its 110th anniversary and Secretary Lyon had a new insignia to grace the announcements; a vertical oblong supporting the City Liberty Bell, with the anniversary date beneath, and the name of the society on the margin.

Dr. T. S. Sheppard, of Millville, was nominated for membership.

Dr. Hobart A. Hare, Professor of Therapeutics, Jefferson Medical College, read a paper on "Disease of the Blood Vessels Outside the Heart". He spoke from the fulness of his long experience, and quoted from those medical masters with whom he had studied in Europe and associated with in later years. He emphasized the need for care in withdrawing proteins too quickly in cases of high blood pressure, and favored the maintenance of a salt-free diet in the presence of dropsy. Cases of low blood pressure need not cause alarm if they be congenital in character. There is no known drug that will permanently correct this condition.

Dr. Thomas Shallow, Demonstrator of Surgery, Jefferson Medical College, gave an illustrated lecture on "Traumatic Lesions of the Head". He said that extreme care should be used in the treatment of lacerations, and drainage must usually be established, for infection might occur through the emissary veins and cause thrombosis. The skull does not regenerate; except in early life the gap will be permanent.

Fractures of the top of the skull, if depressed, will require a decompression operation. Those of the base should be relieved through spinal and cisternal puncture. The dura of the vault is free, but that of the base is adherent and there is always a tear of the arachnoid along with one in the dura. Fractures of the posterior fossa are not common but they are most serious when below the tentorium. Injuries of the brain substance are always serious because there are no lymphatics and no collateral circulation.

The next meeting of the society will be held at the Newcomb Hospital, Vineland, in January; the Annual Picnic, held in September, was very successful and very well attended.

ESSEX COUNTY

E. LeRoy Wood, M.D., Reporter

At the 113th Annual Meeting of the Essex County Medical Society, held Tuesday evening, October 2, 1928, in the auditorium of the Academy of Medicine of Northern New Jersey, the following practitioners were elected members: Walter T. Darden, S. Wolfe Emmer, W. G. Guthrie, Mark A. Kravtsov, Joseph Levin, Robert L. McKiernan, Julius Newman, Samuel F. Ravitz and David Robins, all of Newark; Paul E. RePass and Harry Rogers, of Orange; Dean W. Marquis, of East Orange; John H. Thomas, Jr., of South Orange; and Edwin A. Seifert, of Montclair.

After reading of the minutes of the previous meeting by the Secretary, the Treasurer made his report. The society approved of a \$12 assessment for the year, making \$10 per member available for the State Society and \$2 per member for the county society. The Treasurer's report had been audited by Drs. R. D. Freeman and A. W. Bingham.

Drs. J. J. Farden, J. J. Connolly and F. C. Weber served as tellers during the evening.

Reports were rendered for the following committees: Medical Education and Hospital Activities, by Dr. Wells P. Eagleton; Milk Purification, by Dr. E. G. Wherry; Revision of the Constitution, by Dr. D. A. Kraker.

The Necrology Committee report, by Dr. C. D. Bennett, reviewed the medical careers of an unusually large number of members who have passed beyond during the year. Their names are: William E. Hitchcock, Sidney A. Twinch, Robert F. Ringland, Ralph H. Hunt, Walter Dodge, Mefford Runyon, Eugene W. Murray, Emanuel Klein and Clement J. Halperin.

The following members were elected to office: President, R. N. Connolly; Vice-President, A. W. Bingham; Secretary, F. W. Pinneo; Treasurer, R. H. Rogers; Councilor to fill the vacancy caused by the death of E. W. Murray, D. L. McCormick; Reporter, Earl LeRoy Wood; H. C. Barkhorn, A. F. Dowd, Guy Payne and J. H. Lowrey were elected Councilors for 2 years; Edwin Steiner and W. A. Tansey were elected Permanent Delegates to the State Society.

The Essex County Medical Society, through a special committee consisting of Drs. E. G. Wherry, Chairman, and R. N. Connolly, has distributed among the profession a most instructive leaflet to further the antidiphtheria campaign.

Dr. Max Danzls, the retiring President, addressed the society. Briefly reviewing some of the activities of the society during the year, he recalled the consideration that was given to the proposed Annual Registration of Physicians,

with the arguments that were brought forth in its favor and the factors and reasons that caused the society to forcefully and repeatedly register their opposition to the measure. He reviewed the coöperation of the society with the Welfare Committee of the State Society in preventing the Legislature from passing bills detrimental to our profession and the public. Suggestions to improve this coöperation were offered.

He advocated giving greater attention to periodic health examinations and the utilization of all the resources of the modern hospital in the health analysis. He also advanced progressive ideas about the relation of the hospital staff to the outside family physician and recommended the coöperation of all hospital facilities and clinical material for local postgraduate teaching purposes.

The meeting concluded with a social hour and collation.

Academy of Medicine of Northern New Jersey Section on Eye, Ear, Nose and Throat

Louis Weiss, M.D., Reporter

Dr. Martin Dewey, D. D. S., M. D., Chief of the Dewey School of Orthodontia, New York City, gave an instructive talk on "Factors Concerned in Normal Respiration", illustrating with lantern slides, at the meeting of the Eye, Ear, Nose and Throat Section of the Academy of Medicine of Northern New Jersey on October 8, 1928. Dr. Dewey maintained that normal breathing through the anterior nares will often be established by orthodontia after both tonsillectomy and adenoidectomy have failed. Orthodontia, the correction of irregularities of the teeth and jaw, is a long and tedious procedure, sometimes extending over many years. It requires unremitting coöperation on the part of the patient; often very difficult to obtain. There is no doubt that orthodontia is needed by many individuals, and that normal breathing is a material aid to its success. It is therefore necessary to remove all obstructions from the anterior or posterior nares, such as hypertrofied mucous membranes or turbinates, hypertrofied or deviated septums, polyps, or other growths. The order of procedure should be: first, removal of tonsils and adenoids; second, removal of nasal obstructions; third, the work of the orthodontist.

GLOUCESTER COUNTY

Henry B. Diverty, M.D., Reporter

Members of the Gloucester County Medical Society heard an instructive address by Dr. J. W. Kennedy, of the Price Hospital, Philadelphia, at their monthly meeting held at the Woodbury Country Club October 18.

Dr. Kennedy spoke on the "Significance of Abdominal Pain".

The Ladies' Auxiliary met at the same time, later enjoying the luncheon served by John Proctor, country club steward.

The society was given an invitation by Dr. Lloyd to be present at the dedication of a private hospital in Bridgeton the first week in November.

Among those present were: Drs. Buzby, Downs and Steward, of Swedesboro; Hollinshed and Hunter, of Westville; Black, of Mickleton; Ashcraft, of Mullica Hill; Fisler, of Clayton; Campbell, Diverty, Pegau, Nelson, of Woodbury; Ulmer, of Gibbstown; Knight of Pitman.

Among the guests were Dr. Emma Richardson, of Camden County; Dr. Tracy, of Burlington County; Dr. Reba Lloyd, Ivy Hall, Bridgeton; Dr. Moore, Dr. Hyatt, of Bridgeton, and Dr. James, of Salem County.

HUDSON COUNTY

M. I. Marshak, M.D., Reporter

The Hudson County Medical Society met on October 2 at the Carteret Club, Jersey City, with Dr. W. J. Sweeney presiding.

Dr. Jaffin reported for the Publicity Committee that they had advertised in the various newspapers of the county the fact that the society had made arrangements with the Physicians and Surgeons Exchange to have a list of physicians on hand so that when a person could not get in touch with his family physician, especially at night, they could call the exchange and have them send a physician to cover the call. On the suggestion of Dr. M. Shapiro, a motion was made and passed empowering this committee to communicate with the telephone company in regard to having an advertisement inserted in the telephone directory dealing with this subject.

Dr. Forman reported that the Committee on Diphtheria Prevention was working in conjunction with the State Committee on an intensive educational campaign to be launched during the first 2 weeks in November. He asked for the coöperation of the members of the society in securing speakers and in answering the public demand which undoubtedly will arise. The members were also requested to keep records of all cases treated. A motion to allow the committee \$100.00 to assist in financing the campaign was passed.

Dr. Kuhlmann spoke of a plan for a rating agency for members of the society. On motion, a committee was appointed to look into the matter and report to the Executive Committee at its next meeting.

At the request of the President, Dr. Quigley described a method of obtaining gasoline at a reduced rate, which he had seen operated during the summer. A committee was appointed to interview the oil companies and report back to the Executive Committee.

Miss Hannah M. Creasey, Instructor of Speech at Columbia University and Supervisor of Speech in the Jersey City Schools, then read the paper of the evening. In introducing the paper, Miss Creasey described the male and female cells and chromosomes and the method of conjugation. Acquired characteristics and modifications are certainly not inherited. She thought that the social characteristics were inherited but go on to further development by environment. "Morals is a matter of geography." She spoke of the criminals and delinquents and our present system of segregation and punishment and questioned their effect as a character reforming agency. "Only a small percentage of those incarcerated desire to be criminals." She made a pleas for the study of behavior problems in the youth and claimed that these people are sick and should be treated as such by the prophylactic methods of mental hygiene. "Adult criminals are the product of nonadjusted youth." A discussion on the effect of healthy home atmosphere on the production of delinquents followed. "For character is a great deal builded on example." This theory is insufficient in all cases because so called "black

sheep" do occur. She stated that "civilization consists of adjusting oneself to his environment." The weak have not this ability and when stress is great, they develop behavior difficulties.

A full description of the operation of the Cincinnati Psychologic Clinic was then read. Miss Creasey's conclusions were that the Psychologic Clinic is of value to the parent, courts, schools and social agencies and for vocational guidance. Efficiency of the clinic depends more on the character and training of the person than on money or plant.

Drs. Jaffin, Von Deesten, Spence, Margaret Sullivan, Doody and M. Shapiro discussed the paper.

North Hudson Hospital Clinical Society

Reported by J. Africana, M.D.

The regular monthly meeting of the Clinical Society was held at the hospital, October 16, 1928, with Dr. William Sweeney presiding. The hospital report for the month of September, 1928, was read by Dr. Tannert, and showed a total of 270 patients discharged as cured or improved; 17 deaths—10 surgical, and 7 medical cases; 3 still-births; and, 4 autopsies were performed.

Case No. 13529, one of the deaths, was discussed by Dr. Klaus. This was a case of strangulated femoral hernia in a female aged 71 years. Operation was performed under spinal anesthesia and on freeing the neck of the sac the strangulated loop of intestines slipped back into the abdominal cavity. Examining this loop of bowel an irregular tear was noted $1\frac{1}{2}$ in. long. Owing to the excessive edematous condition of the bowel, the tear could not be repaired and a resection was done. Shortly after operation the patient went into coma and died from cardiac failure with pulmonary edema; post-mortem examination showed no leaking from the anastomosis, and the specimen held water tightly. This patient had a perforated bowel, due to the application of severe taxis, by a doctor on the outside, and shows that taxis should not be applied to any hernia.

Dr. Weiss asked about the condition of the heart, and the blood-pressure before operation, and cited a case of his that after operation developed distinct coronary symptoms following administration of spinal anesthesia.

Dr. Klaus said he believed the spinal anesthesia had nothing to do with this patient's death—she was a stout woman, elderly, and would have been a poorer risk with general anesthesia; her blood pressure was 190 before operation, and during the operation fell to 120, the blood pressure being taken at frequent intervals. In this case spinal anesthesia lasted for only 1 hour, and the patient was given hyoscine, which quieted her.

Dr. Lange asserted that if local anesthesia had been used instead the intestines would not be so apt to slip back into the abdominal cavity, implying that spinal anesthesia possibly causes such relaxation. Reference was made to a case operated upon the day previous by Dr. Klaus; a strangulated hernia, where under spinal anesthesia the hernia disappeared just before the incision was made.

CASE PRESENTATIONS

Hematemesis as a Postoperative Complication of Hysterectomy. Dr. Roberts: I. T., age 30, came under my observation on August 7, 1928; a

woman of small stature, weighing about 100 lb., very nervous and high-strung, with complaint of profuse bleeding for the past 10 days, beginning on the day of the expected menstruation; had missed no periods. Underwent a curettage 3 years ago, for a possible miscarriage, and an appendectomy 1 year ago. Since marriage she has been having profuse bleeding of 7-10 days duration. Because of the highly hysterical condition of the patient, bimanual examination was unsatisfactory. She was admitted August 10, 1928, and curettage yielded a small amount of debris from the uterus, on which the pathologic report was chronic hyperplastic endometritis. After 3 days rest in bed, she was discharged as cured with no bleeding.

Less than 2 weeks later the symptoms recurred, aggravated by any slight movement in bed. She was readmitted to the hospital, and rest in bed with the usual remedial measures such as ergot, stypticin, and thromboplastin proved of no avail. After consultation with Dr. Thomas Cherry, it was decided to do a hysterectomy, with retention of the adnexa; this was performed without difficulty by myself, on September 12; the right tube and ovary were missing, presumably removed when the appendectomy was done; the uterus was normal in size, but very fibrotic; the patient, while on the table, coming out of the anesthetic, vomited large amounts of coffee-ground vomitus; she did not take the anesthetic well, being deeply cyanosed throughout. Her course for the next 5 days was most stormy; the vomiting continued, always of the coffee-ground nature, but at times even bright red blood was present; she complained of severe epigastric pain and tenderness; the pulse was poor, and the general condition not encouraging. Clysis of saline, with addition of adrenalin, thromboplastin, and ice-bags finally checked the hematemesis on the fifth day postoperative, and recovery from then on was uneventful except that epigastric pain was always present regardless of whether the stomach was full or empty.

To me, the uncommon features of this case are: first, that uterine bleeding could occur so shortly after a curettage, which I believe to have been thorough; secondly, that postoperatively there was persistent vomiting of blood. I believe the case to be one of true postoperative hematemesis, because of lack of any evidence of gastric ulcer, cancer, hepatic cirrhosis, leukemia, purpura, etc.

DISCUSSION

Dr. Lange asked about the blood, as to the count, blood platelets, and coagulation time, and mentioned as possible causes of the vomiting—hemorrhages of the mucosa of the stomach, and toxic pyelitis.

Dr. D'Acerno believed the case to be very interesting as presented, but disagreed with the treatment instituted; he would have tried transfusions first, then radium—providing there was no pregnancy present—then removal of the uterus would be indicated if the bleeding did not stop. Concerning the cause of the hematemesis, he suggested thrombosis of the pelvic vessels, giving off an embolus to the walls of the stomach with resulting infarction and erosion of the mucous membrane; another explanation offered is that after operation a sinking of the pelvic loops of bowel might occur, dragging on the superior mesenteric artery so that it pressed on that part of the duodenum at the level of the second and third lumbar vertebrae, leading to necrosis, and hematemesis; also, a hemophilic condition of

the uterus is to be considered as a possible cause of the uterine hemorrhage.

Dr. Pearlstein said that if high blood pressure existed, it could be considered; he was against a local cause like ulcer or thrombosis, where one would have to think of a previous cardiac condition; he was more inclined to regard the situation as a type of blood dyscrasia, and hence would want a detailed study of the blood, which was not done; hemophilia as an explanation would not hold, as this condition is exceedingly rare in females, though that tendency might be present.

Dr. Braunstein was against the diagnosis of thrombocytopenic purpura, and if it were a case of purpura, it must be an early one, as there were no purpuric spots and the spleen was not enlarged.

Dr. Comora asked if a barium or bismuth meal had been given, to show esophageal varix?

Dr. Tannert asked if the stomach has been examined at the time of operation.

Dr. Roberts replied there had been no signs or symptoms of stomach trouble before operation, hence no roentgenogram was taken, nor was the stomach examined at the time of operation; the blood count was normal, but the platelets were not counted; the blood pressure was not high; on the contrary, it was subnormal; transfusion was considered at the beginning, but as regards using radium, he disagreed, as it would bring about a premature menopause.

Spontaneous Rupture of a Pelvic Abscess into the Vagina. Dr. Sweeney: A. M., female, single, age 19, was admitted to hospital ward on September 1, 1928, complaining of pain over the abdomen, chills, fever and vomiting. These symptoms appeared suddenly about 36 hours previous to admission, and her history revealed a previous attack relieved by ice-bags. Examination showed tenderness in R. L. Q., and rigidity of the right rectus. Temp. 102.4°; pulse 130. WBC 22,000, with 82% polys. and 18% mononuclears.

With history of previous attack, operation was advised. Upon opening the abdomen a thick, discolored appendix was found, covered with a fibrinous exudate, and about it thick purulent fluid with fecal odor; the appendix was removed, and a cigarette drain inserted down to the stump.

The temperature gradually fell to normal during the next 3 days and drainage became profuse, with a marked fecal odor. However, on the fifth day the temperature rose to 102.4°, and kept on rising at night and remitting in the morning, simulating a sepsis; a pocket of pus was suspected in the wound but probing proved none to be present. On the tenth day the nurse reported that a fairly large amount of foul-smelling purulent fluid was discharged vaginally. Rectal examination at this time revealed induration and tenderness on the right side of the pelvis, but no definite mass. Potassium permanganate douches were instituted, and temperature began to recede and the patient's appetite and strength improved.

This case is of interest in that it shows the ever-present possibility of pelvic abscess following a suppurative appendix even though sufficient drainage may be made.

DISCUSSION

Dr. D'Acerno stated that an incision through the posterior wall of the vagina, after pelvic abscess was diagnosed, would have prevented nature from taking its course, or at the time of

operation a drain could have been inserted into the pelvis.

General Peritonitis Following Hysterectomy. Dr. Schulman: F. B., age 43, admitted to the hospital July 30, 1928, complaining of pain in the lower abdomen. Her past history irrelevant except that she had frequency and urgency, with pains, and nocturia for many years. Menstruation has always been regular, with moderate flow, and for the past year has had premenstrual dysmenorrhea. Her last 2 periods were 2-3 days earlier than usual, with pains severe, more than usual. Last menstrual period on July 1. A few days before admission, patient was suddenly seized with severe cramps and bearing down pains; these began on the left side and radiated to the right, associated with gaseous eructations. Did not feel faint, nor notice any spotting or vaginal bleeding. Felt pressure on rectum during pains, and passed flatus frequently.

Physical examination showed the abdomen tender in both lower quadrants, and a mass on the left side. Vaginal examination was very unsatisfactory, but there seemed to be a small, soft mass on the left side which was not tender. At operation the uterus was found to be enlarged to twice the normal size, and contained 3 or 4 small fibrotic nodules. The left tube was swollen to about 5 times normal size. The left ovary was enlarged, adherent, and injected. A supra-vaginal hysterectomy, with removal of the adnexa, was done. There was some oozing on the left side which was controlled with difficulty; the abdomen was closed without drainage.

The pathologic report showed a fibroid uterus, chronic salpingitis, and papillary carcinoma of the ovary. Due to change of service the next day, the patient was transferred to Dr. Roberts. When first seen by the gynecologic department, she was complaining of severe pain in the abdomen, with slight distension. One day later, she was more distended, and began to vomit; her temperature rose to 101°, and pulse to 110; these became worse, temperature rising to 104°, pulse more rapid and thready. A week later, after a consultation with Dr. Sweeney, it was decided to do a colpotomy, or an abdominal drainage if nothing was obtained. Colpotomy resulted in only a small amount of foul-smelling, slimy, congealed blood; therefore, the lower part of the scar was opened, and the fascia, muscle, and peritoneum opened and a through and through drain was inserted. The patient's symptoms did not abate any, her distension becoming more marked, her vomiting persistent, and temperature varying between 102-105°, and she expired on August 10.

DISCUSSION

Dr. Schulman emphasized the need of personal follow-up on surgical cases. On account of change of services, such patients are usually regarded as simply postoperative cases without anything interesting about them.

Dr. Tannert, who performed the hysterectomy, could not account for the general peritonitis; as far as he knew, though the uterus was exceedingly matted and hard to remove, it was peritonealized perfectly; infection of the muscle sutures may have been the cause; he objected to the reopening of the abdominal wound, contending that a colpotomy was sufficient.

Dr. Roberts maintained that the abdominal second incision gave her wonderful drainage, as shown by the free discharge which followed; this patient was extremely distended, and was

vomiting excessively; the bowels were pushed way down so that they checked pelvic route drainage; he was of the opinion that there must have been considerable oozing during and following the first operation, and wondered how the patient lived so long, as she had carcinoma.

Tumor of the Sigmoid Colon Complicating Pregnancy. Dr. Schulman: A woman, aged 26, para 3, was admitted to the hospital pregnant, full-term, and having irregular pains. Until her fourth month she felt fine, except for severe heart-burn, following which she started to have diarrhea of 10-12 stools a day, full of mucus, but no blood or pain. Examination at this time revealed a small mass on the left side about the size of a plum which I diagnosed as enlarged ovary. Her diarrhea could then be controlled by medication, but later it increased so that the patient could not stand or walk without having a movement. No blood was passed as yet. Her history before pregnancy showed no intestinal symptoms, and she never had diarrhea before, but did complain always of dysmenorrhea and menorrhagia. Examination at the seventh month showed the mass to be getting much larger, and nodular; the head was also palpated vaginally, as the vaginal tract was very relaxed, and the abdominal wall very thin. The diarrhea at this time was very severe, and twice during the seventh and eighth months contained large amounts of blood; the patient looked very weak, and anemic; medication failed to check it from then on. At the ninth month the mass was the size of a coconut, situated posteriorly in the pelvis, immovable, hard, round and nodular. On September 4, she went into what seemed like active labor; examination showed the mass impacted in the pelvis with the head of the fetus riding on top of it; the pains were irregular, and the cervix showed no dilatation; the pains stopped after 24 hours. Due to the fact that the full term was about September 14, I decided to wait. Slight pains recommenced, and patient was admitted to the hospital on September 11, for a cesarean section, with a diagnosis of ovarian tumor, either cyst or sarcoma, causing dystocia and obstructing labor. The diarrhea was practically continuous at this time. Her hemoglobin was 42%, red cells 2,400,000, and color index 0.9; due to the anemia, a transfusion was performed September 13, which increased the hemoglobin to 55%, and the reds to 3,500,000. Cesarean section was performed the same day, with the delivery of a full-term living female child; the mass was found to be a tumor at the rectosigmoid junction, very hard, involving the entire intestinal wall, but the lumen was still patent, allowing gas to pass through; there were numerous hard, scybalous masses in the large bowel about 1 to 2 feet proximal to the tumor. It was decided to close up the wound and leave the tumor for a later operation; the diagnosis of the tumor was indefinite, as to whether it was tuberculosis or carcinoma of the intestine. The patient made very good progress the next 2 weeks in the hospital, at no time having any diarrhea or vomiting, and the mass on the left side getting smaller, and bowel movements only 1-2 times daily; the general condition improved rapidly, the hemoglobin staying at 55%, temperature never going above 101°, and pulse always about 90.

On September 24, the patient suddenly complained of severe intermittent cramps, occurring every 4 minutes, but with no vomiting or any distension, or diarrhea; the pain could only be

controlled by morphin. Diagnosis of partial intestinal obstruction was made. This gradually subsided after 3 days, and as the patient looked weak, and "washed out", operation was again deferred. Patient then seemed to pick up again, and was sitting up in bed; however, on October 3, she suddenly started in to vomit, the abdomen became markedly distended, with no bowel movements, or the passage of flatus; she suffered severe cramps, distension and vomiting increased, and laparotomy was performed immediately. On opening the peritoneum, fluid was found to be present. The tumor mass was found to be very hard, and encircling the entire bowel; the proximal end of the colon was enormously distended, and very hyperemic. A small loop of ileum was adherent to the mass, as was also a piece of omentum. A diagnosis of carcinoma of the colon was made and a first stage Mikulicz was done, bringing the tumor mass and part of the colon out of the wound, and suturing the peritoneum, muscle and fascia to the intestinal wall, sealing it off from the peritoneal cavity. A colostomy was done following this, and a large caliber tube inserted into the opening. The distension disappeared, and after a second transfusion the patient seemed improved. Her vomiting stopped and after removal of the tube, feces and flatus passed freely; 4 days later the second stage was performed, the protruding colon loop was excised, leaving the colonic limbs as a double-barreled tube with open free ends. The pathologic report of the excised tumor was adenocarcinoma of the colon.

After the second stage, the patient's condition grew worse. There was no stool coming from the proximal tube, but only a large amount of mucus. The distension increased, hiccoughing and vomiting started. The proximal end showed sloughing into the peritoneal cavity. The pulse became weaker, distension and vomiting increased, temperature rose, and the patient died of a peritonitis on October 11.

The reason for presenting this case is the extreme rarity of intestinal tumors causing obstruction to the progress of labor, and the comparative youth of this patient. The ideal time to do a Mikulicz is when there is no obstruction present. If the secondary operation had been performed before obstruction, I think the patient's life might have been prolonged.

DISCUSSION

Dr. Roberts thought it amazing that such a condition could exist, and a fetus go to full-term.

Dr. Klaus commented on the age of the patient; usually cancer occurs a decade or two later. The immediate indication in this case was relief of intestinal obstruction and the question arose as to whether a cecostomy or a first stage Mikulicz operation with immediate drainage of the bowel above should be done. The latter procedure is the more ideal as it not only deals with the obstruction, but also with the tumor itself and the elimination of a temporary colostomy and its subsequent closure. A first stage Mikulicz operation was done in this case inasmuch as it had been predetermined at the time of the cesarean that the tumor in the sigmoid was extremely mobile and could easily be brought out on the abdomen. In the presence of an obstruction this operation is more formidable than a simple cecostomy, and in spite of the fact that it saves the patient 2 additional operations it is by far the safest procedure in the presence of an obstruction to entirely ignore the tumor and per-

form a colostomy at a more proximal point and at a later date proceed with removal of the tumor under more favorable conditions.

Dr. D'Acerno suggested that if a sigmoidoscopic examination had been done, and the tumor located in the bowel, it might have led to a different type of intervention, as a Gigli pubiotomy would lessen the shock to the patient.

Dr. Pearlstein gave a practical point, in that when differentiating carcinoma from tuberculosis of the bowel, the latter starts on the proximal side, at the cecum usually, while the former starts near the termination of the bowel.

Dr. Koopermann questioned any good coming from a Gigli operation.

Dr. Schulman, in closing, stated that the diarrhea was thought due to pressure on the bowel of the mass diagnosed as ovary; he had advised intervention at the sixth month, but the patient's husband refused.

Case of Osteochondritis Dessicans. Dr. Kuhlmann: S. A., age 24, is presented to illustrate a case of dissecting osteochondritis and, furthermore, to emphasize the frequent necessity of adequate incisions. That there has heretofore been an unwarranted fear of entering the knee-joint is evident from the paucity of our knowledge concerning the living pathology of this joint. It is still common to refer to knee disabilities as internal derangements. Would it not seem ridiculous at this day to speak of all lesions of the peritoneum as inflammation of the bowels? Yet this would be the case were it not for the fact that the abdominal cavity has been boldly attacked and its internal derangements brought to light.

Six years ago the patient fell from an overhanging bar in such a manner that the left thigh and leg came into contact with the floor by their outer aspects. Then, while the knee was in a flexed position, a companion fell on top of the patient, striking the inner aspect of the joint. There was immediate swelling and disability, but under rest the knee was entirely well after 3 weeks. One year ago he again injured the knee while playing tennis. The mechanism in this instance he believes to have been a shifting of the femur or the tibia, as though the tibia were dislocated outward. This sensation was momentary but was repeated twice within the next hour. There was no locking and but little pain associated with this sensation. The knee ached generally, became swollen, but after one week of rest again was normal in every respect excepting a feeling of slight insecurity. One month ago, while on the football field, a companion playfully struck the back of the knee, flexing it and causing the patient to fall to the ground. There was immediate pain and disability, not at the moment of striking the ground but from the moment the knee began to flex. There was, however, no localized external pain nor locking nor limitation of extension, but deep aching pain within the joint. On the following day the knee was immobilized and the patient kept at rest a week. He was then allowed up, the knee still being immobilized, but the pain continued and much doughy swelling and limitation of flexion was present. There was no locking and only slight limitation of extension, and no single point of exaggerated tenderness. The roentgenogram showed a small calcium-containing flocculus near the outer aspect of the internal condyle. As this could not be approached by the usual lateral incisions, the longitudinal anterior parapatellar incision was used. On drawing the patella aside,

thereby exposing the entire joint, the small flocculus was discovered to be a much larger piece of cartilage, almost quadrilateral in shape, 1.5 x 1 cm., attached by a broad base to the anterior external surface of the internal condyle, hanging downward, touching the anterior limb of the internal semilunar cartilage and leaving a bed in the condyle from which it had been partly detached. This, however, was not the only abnormality. The external semilunar cartilage was detached from the capsule and was abnormally movable. The internal semilunar cartilage presented normal mobility but was covered with a thick, velvety pannus. The internal condyle was likewise partly covered while the fat pad, ligamenta alaria, and suprapatellar pouch were not only covered with thick, deep red synovium, but presented many large pea-like villi. The hanging piece of cartilage was detached. It was noticed at this point that the edge of the cartilaginous bed was not in close contact with the bone underneath. The anterior 2/3 of the internal semilunar cartilage, infiltrated with pannus, was removed, and the same amount of the loose external semilunar cartilage; the fat pad, ligamenta alaria, and all the hypertrophied synovia on the condyles, capsule and pouch were then dissected off. The crucial ligaments appeared normal but in retrospect I believe that they were stretched and might to good advantage have been tightened. The joint was then closed by suturing capsule with plain gut, and skin with silk. On the next day passive motion was begun, and at the end of a week there was almost complete painless flexion and extension. At the end of 2 weeks the patient was walking with only the support of a cane and at the end of 3 weeks returned to his work.

Now, let us attempt to harmonize the clinical symptoms with the pathologic picture. The original injury 6 years ago certainly did not tear or displace any structure as the disability cleared up in 3 weeks and remained so for 5 years. It may, however, from its nature have stretched the crucials, this accounting for the slight feeling of insecurity. The second injury I am convinced stretched the crucials further, and without doubt accounted for the loosening of the external cartilage. It is well known that abnormal mobility of this cartilage produces a sensation of movement akin to gross dislocation of the tibia unassociated with marked pain or locking. That this sensation of movement was not due to any gross shifting of femur on tibia implying a rupture or extreme stretching of the crucials is proved by the short subsequent disability of one week and the absence of marked instability thereafter. The last injury one month prior to operation in all likelihood caused the shearing off of the cartilage and the enormous reaction resulting in marked generalized proliferating synovitis. I say this because of the almost exact correspondence in size of the detached cartilage and its bed. The most potent cause of disability finally, I believe to have been due to the inflamed synovium, but the abnormally mobile external cartilage may have caused future trouble and the detached femoral cartilage certainly would have caused future locking. Removal of the hypertrophied synovium practically made him well in a week, and in addition 2 sources of after trouble were removed. This could never have been accomplished by anything short of an adequate incision. By adequate incision is meant either the anterior parapatellar approach, the split-patellar ap-

proach, or the Hey-Groves approach (separation of tibial tubercle and reflection of patella upward.) The first mentioned is preferable because it obviates the 3 weeks of rest necessary in the other 2 bone dividing operations. At the present time, 11 months later, the patient has full movements and neither pain nor swelling. There is, however, a slight sense of weakness and increased mobility of the leg, on abduction, which I believe due to a stretching of the anterior crucial, internal lateral ligament, or both, at the time of his injuries, and not to the type of incision.

The term, osteochondritis dessicans, is applied to a condition in which a separation of the articular cartilage of the femoral condyles occurs, from the underlying bone in a strictly localized area. In the present case it seems to have been due to the trauma, i. e., a shearing off of the cartilage by the force-theory of Konig, who first described the condition in 1888. Later on Colvin advanced a toxic theory because in his cases no injury occurred; there was aching pain of several years duration, in which time several x-rays showed alterations in the articular cartilage from the region of which the cartilage was later found detached. He considers it therefore, a nonsuppurating osteitis. The theory held at present is that of Axhausen, who while admitting the influence of trauma, claims that the microscopic findings in several cases undergoing exploration immediately after injury, suggest a process antedating the trauma, most likely some form of arterial occlusion within the condyle.

DISCUSSION

Dr. D'Acierno was inclined to look upon the condition more as an acute traumatic affair, with a possible antecedent etiology like lues, than as an inflammation.

Dr. Klaus referred to the incision used by Dr. Kuhlmann as being somewhat similar to the lateral knee incision but considerably larger and coming more forward in its lower half. He referred to the excellent exposure obtained by the incision described by Morehead, known as the mediolateral incision, through which the entire knee can be most thoroughly explored. He mentioned the importance of active motion immediately after operation accounting for the good result obtained in Dr. Kuhlmann's case as well as in all acute suppurative infections of the knee as demonstrated by the Wilhelms method.

Dr. Sweeney advised passive motion, the quicker the better.

Dr. Kuhlmann, in closing, stated that some surgeons are very adverse to large incisions as it weakens the knee-joint; this is wrong, and a large incision as described does not divide any important ligaments, just the enlarged fat pads, etc., all more or less of a similar nature which produce mild to severe locking, with pain; whatever is causing the trouble the incision bares that pathology; the knee-joint is just as resistant to infection as the peritoneal cavity. In regard to Dr. D'Acierno's remark on inflammation, he stated that with parts of the cartilages in the joint, due to repeated lockings, a generalized hypertrophic synovitis can be produced, and which can be demonstrated; therefore, the advantages of removing these structures and the synovial membrane dissected as necessary, as in this patient in whom all the structures were removed, and only the patella remained; yet he walks after 2 weeks and has a good knee.

A Case of Tennis Elbow. Dr. Kuhlmann: H. S., age 38. This case is shown as an example of a minor disability capable of causing prolonged and apparently interminable incapacity for work. On December 11, 1928, the patient, who is a metal ceiling worker, was struck by a falling jack across the external aspect of the right elbow. Beyond temporary bruising of a few days duration nothing was apparent until he attempted to resume his occupation. This involved constant use of the extensor muscle of the forearm in the act of hammering nails into the ceiling, thus bringing under constant strain the identical muscles used in striking a tennis ball. The moment that the hammer was used pain developed in the region of the external aspect of the elbow, radiating down the back of the forearm. This state of affairs continued for about 3 months when the patient noticed a small lump over the region of tenderness when the elbow was flexed. He was treated at the Neurological Institute for 1 month, at the Postgraduate Hospital for 3 months, and at the Hospital for Bone and Joint Diseases for 4 months. The diagnosis generally was rheumatism, and the treatment medication, salves, and diathermy. It is now 6 months since the original injury and during this time the patient has worked only 2 days, although it is worthy of note that he sought no compensation, and eked out a living by opening a small notion store. At this time I saw him, the physical signs being as follows: (1) Pain on active extension, immediately below the external condyle, and radiating down the arm; (2) appearance of a smooth, tense, elastic bean-sized swelling at this site when the forearm was flexed; (3) tenderness over this site; (4) slight atrophy of the extensor muscles; (5) limitation of motion; (6) no crepitus; (7) negative x-rays. Operation—under local anesthesia July 23, 1927; a 2½ in. incision was made; the common extensor was split and a bursa of the size of a small lima-bean containing clear viscid fluid and a thickened wall was excised. The wound was closed and the arm put in a sling. Recovery was uneventful, with the exception of a severe iodine burn; in 6 weeks the patient was able to resume his former occupation. Since this time he has remained free of symptoms.

The term tennis elbow is not always associated with the occurrence of injury and irritation of the radiohumeral bursa. There is no reason why a simple strain of the common extensor attachment could not give the same subjective symptoms. I have had a few such cases, but simple splinting in extension for a week, followed by a bulky bandage at the elbow to limit active movement somewhat, served to effect a cure within 3 weeks. In the present case, however, we had an enlarged and tender bursa, plainly discernible, and the removal of which effected a cure.

DISCUSSION

Dr. Comora asked if the condition were frequent.

Dr. Kuhlmann has seen a number of cases of the mild type, due to strain, but only this one in which the bursa had to be removed.

Dr. Sweeney had 1 case that was the result of fighting; the analogous condition in the leg is the forcible strain or rupture of the plantaris tendon. This patient was also brought to the meeting, and said he had no pain or disability in the elbow.

Infiltration of the Lung of Obscure Origin. Dr. Pearlstein: S. F., white, male, age 40, admitted

to the Hospital on July 8, 1928, complaining of pain in the right lower portion of the chest, chills and dry hacking cough of 3 days duration. Pain increased on respiration or cough.

Patient continued to work as trackman until admission to hospital. On entrance temperature was 103°, pulse 110, respiration 28, B. P. 128/40. Examination revealed limited expansion on right side of chest, diminished vocal fremitus over this area. Heart not displaced, and no murmurs audible. Blood count showed a slight secondary anemia, and a leukocytosis of 14,850, with 79% polys. Sputum showed pneumococci, but no acid-fast organisms. X-ray examination revealed infiltration of right middle lobe, suggesting pneumonia.

Dyspnea became marked. Temperature of septic type, ranging from 99-102°, with dry cough, and pain in the chest, continued. Leukocytic count showed decline to 8000 and less, with a low poly count of less than 70% within 4 days. Effusion of tuberculous origin was considered. On July 13, a thoracentesis was attempted. It appears that this was unsuccessful and about ¾ of the hypodermic needle was broken off beneath the skin. Its location was visualized by x-ray examination, but its removal was deferred until convalescence.

Cough became productive on the tenth day, of small amounts of mucopurulent material. X-ray report on July 13, 5 days following admission, stated "marked density of middle right lobe; outer 2/3 appears encapsulated". On July 31, an incision was made on the right side posteriorly over the tenth rib, attempting to remove the needle, but it could not be found.

The patient came to my attention on August 2, about 1 month after admission. Patient appeared emaciated and complained of pain in the right chest. Ill-defined areas of dullness to flatness, with distant breath sounds, and crepitant râles was noted over the right middle lobe posteriorly. Emaciation with clubbing of fingers was noticed. After several weeks, amphoric breathing developed over a localized area of the middle lobe. X-ray examination revealed a fluid-level over this area. A diagnosis of abscess was made.

Because of cavity formation the invasion of saprophytic spirochetes was considered, from the upper respiratory tract. It was then decided to introduce arsenical injections. This was followed by an almost immediate decline in temperature to normal. However, within a few days it rose again to 103.4°. Two additional injections of neoarsphenamin intravenously failed to bring about any definite response.

It was decided to give iodides in large doses daily. At the same time postural treatment was instituted. The iodides were given with the idea of helping absorption of fibrous infiltration. Wassermann tests were negative on 2 occasions. Within 2 days the patient began to have rather profuse expectorations of purulent material. The septic temperature began to decline rapidly, and within several days became normal. Breath sounds gradually increased and became more distinctly audible; of the bronchovesicular type. Râles began to disappear, and percussion note became more resonant. General condition improved almost miraculously, all symptoms completely gone within a week. For the first time since admission patient was able to leave his bed, and was discharged as cured on September 22, 1928.

This case is reported because of the peculiar behavior of infiltration of the right lung; first,

the length of time; second, excavation within the infiltration; third, clearing up of excavation and infiltration by iodide therapy, and postural treatment.

DISCUSSION

Dr. Luippold, who saw this case, thought it was an unresolved pneumonia; the salvarsan may have helped toward recovery by its tonic effect, while the iodides helped absorption; the postural treatment also contributed to the rapid recovery.

Dr. DeMerrit asked if the expectoration was so profuse as to suggest abscess.

Dr. Baunstein was inclined to regard the infiltration as of luetic origin; he saw another case in a New York hospital of the same type, in which x-ray examination of the long bones showed an extensive periostitis; in this patient iodides cleared up the symptoms.

Dr. DeMerrit wanted to know if the Wassermann was followed up afterward, and Dr. D'Acerno if a Kahn test had been done on the patient.

Dr. Green answered in the negative, and said that the iodides and the arsenicals were given for both diagnostic and therapeutic reasons.

Atypical Typhoid Fever. Dr. Pearlstein; G. J., white, male, age 39, laborer, admitted to the hospital September 9, 1928, with a diagnosis of typhoid fever made by an outside physician, who was supposed to have obtained a positive Widal the day before. Present illness began a week before entrance, with sudden onset and cramp-like pain across upper abdomen, with severe diarrhea of watery stools. Patient continued to work during part of this attack. The diarrhea was checked but pain persisted on admission, and also vertigo and weakness.

Examination revealed some diffuse abdominal pain and tenderness over the right iliac fossa. Liver palpable. Spleen just palpable. Temperature 102°; pulse 92; respiration 26; B. P. 128/78. For 3 days temperature ranged between 101-104°, rising in the evening, but beginning to decline on the fourth day, and continuing remittently during the following 4 days; on the seventh day it was nearly normal; on the eighth day it again rose to 102°. Pulse ranged from 80-90. Accompanying the rise in temperature, patient began complaining of pain along the medial aspect of the upper third of left thigh; there was no swelling or redness present. Suspecting a thrombophlebitis the limb was kept at rest in the horizontal position until pain subsided completely within 4 days, at which time temperature began to decline by lysis, reaching normal level on September 27, 19 days after admission to the hospital.

The Widal reaction remained negative after admission to hospital. Leukocyte count was 9000, polys 70%, on the first day and varied only slightly during the entire course of the disease. Repeated stool and urine examinations for typhoid bacilli were negative; on September 16, 8 days after admission, blood-culture revealed a Gram-negative, motile bacillus, which did not ferment dextrose.

We present this case because of several interesting features in its course: (1) An ambulatory type of typhoid, admitted to us in its declining period; (2) persistence of negative Widal throughout its course; (3) the not unusual complication of a thrombophlebitis with its sudden rise of temperature and pain along the thigh; (4) the rather short course of the disease leads us also to have in mind paratyphoid.

Osler Clinical Society

M. I. Marshak, M.D., Reporter

The Osler Clinical Society met at the Union League Club, Jersey City, on October 17, 1928, with Dr. J. L. Rosenstein presiding.

Dr. L. Franklin presented reports on 2 cases of renal calculus, contrasting the symptoms and the necessity for immediate operation in these types. The first, in which the calculus was small but so situated as to produce marked distension of the ureter and renal pelvis, presented acute symptoms which necessitated immediate operation. In the second, the calculus was large but because of its position did not produce distention and lasted for many years with vague symptoms. The diagnosis was eventually made by the Roentgen ray.

Dr. M. Shapiro gave a supplementary report on the case of granuloma inguinale previously shown and stated that following 30 intravenous injections of sodium thiosulphate, the patient made a complete recovery.

Dr. Von Deesten read the paper of the evening on "Pulmonary Complications Following Operation and Injury", introducing his subject by discussing the difficulty of making accurate diagnoses in these cases and citing the following to illustrate his ideas on the subject:

(1) An ectopic gestation patient sat up on the twelfth day after operation. She suddenly developed dyspnea, with pain in the chest, and went into collapse. A few days later she showed signs of fluid in the chest; this was removed and the patient recovered. The sequence in this case was thrombophlebitis of the pelvic veins followed by emboli with lung infarction and pleuritis.

(2) On the fifth day after operation for cholelithiasis, the patient was ordered up. The patient gasped and died; death due to embolus.

(3) A few days after an appendectomy, the patient developed a friction rub followed shortly by bronchovesicular breathing and pleural effusion. This was due to an infarct.

(4) Twelve days after an operation for inguinal hernia, the patient developed pain in the chest with cough and friction signs which cleared up in a week. The signs and symptoms were due to emboli.

(5) A case of traumatism with contusion of the left thigh and thrombophlebitis was followed by infarct in the left lung.

(6) This was a case of postoperative pneumonitis which developed in 48 hours after a laparotomy and showed fever, pain, cough and friction râles.

(7) Sudden fever, cough and dyspnea developed 48 hours after a prostatectomy. Signs showed consolidation of the whole of one lung, with the heart displaced toward that side. This was a case of massive collapse. The most usual pulmonary complications following operation are massive collapse, emboli with infarction, and infections of the pulmonary tissue followed by abscess and gangrene. They seem to be more frequent following operations in the upper part of the abdomen. In a majority of the patients, recovery takes place after a more or less stormy time. Most of these cases were formerly attributed to ether irritation followed by infection. It would be wise to keep all such patients in bed until the temperature is normal rather than getting patient up too soon. No operations should be done in the presence of

an upper respiratory tract infection, except in case of emergency.

Drs. Jaffin, Miner, L. Franklin, Waters, L. Pyle, Blanchard and Rosenstein discussed the paper.

HUNTERDON COUNTY

Leon T. Salmon, M.D., Secretary

The Hunterdon County Medical Society met at Flemington at 10:30 a. m., October 23, 1928. There were present: Drs. L. A. Hamilton, Isidor Topkins, F. A. Thomas, M. H. Harman, M. H. Leaver, B. S. Fuhrman, F. W. Closson, A. H. Coleman, F. H. Decker, G. B. Tompkins, Francis Apgar, C. G. Boyer, L. C. Williams and L. T. Salmon.

Immediately the courtesy of the floor was extended to Mr. Shriever, representative of Parke, Davis & Company, who showed a motion picture in which the manufacture of serums and vaccines was portrayed. He was extended a vote of thanks by the society.

After roll call and approving of minutes of the former meeting, the society entered into a stimulating discussion of the Schick test and the practical value of the toxin-antitoxin treatment. This debate well preserved the society's reputation for expression of individual opinion and was generally enjoyed.

The following officers were elected for the ensuing year: President, T. B. Fulper; First Vice-President, A. Louis Gramsch; Second Vice-President, C. G. Boyer; Treasurer, E. W. Closson; Secretary and Reporter, L. T. Salmon; Delegate to State Society, L. A. Hamilton; Alternate, Isidor Topkins. The appointment of Censors was deferred until the new President shall preside. Notation is here made that the Permanent Delegates of this society at the present time are Drs. English, Coleman and Salmon.

Dr. Henry O. Reik, who arrived at this juncture, delivered an impromptu address upon the subject of State Society work.

Dinner followed adjournment.

MERCER COUNTY

A. Dunbar Hutchinson, M.D., Secretary

The Mercer County Medical Society resumed its meetings on October 10 after a summer suspension, the members responding to the call for the first meeting in large percentage.

Dr. Fred D. Weidman, of the University of Pennsylvania, after being introduced by President Sista, entertained the members with a very interesting description of the conditions surrounding the infections following the growth of fungi. Dr. Weidman took as his subject, "The Place of Fungi in Modern Medicine". Slides were used by the doctor in the course of his lecture; these bringing vividly to mind many of the more common skin eruptions so often met with by the general practitioner. Dr. Weidman paid particular attention to the early considerations of fungus infections and yeast infections. The early recognition of the infection being the principal factor, as in all other diseases, in the institution of proper methods of treatment. Iodin, x-rays and physiotherapy were discussed in his resumé of treatment.

The members displayed great interest in the discussion which followed. Dr. Weidman closed his address with answering several questions that had been propounded.

The committee appointed to arrange for the Annual Banquet was authorized to proceed with power to act.

MORRIS COUNTY

Marcus A. Curry, M.D., Reporter

The annual meeting of the Morris County Society was held the evening of Tuesday, September 25, 1928, at The New Jersey State Hospital at Greystone Park. President Haven presided over an attendance of 34, including as guests 7 comparatively recent appointees to the hospital's medical staff.

Routine business was transacted; this including the election to membership of Dr. Marie Gregory, of Madison, and 3 proposals for membership—Antonio Hubert and George W. Comeau, both of the staff of the Greystone Park Institution, and Alfred J. Truax, of Boonton.

Treasurer Reed made a very gratifying report of his stewardship, and following custom the President appointed Dr. Williams to audit the books of the Treasurer.

Dr. McMahon, of the Library Committee, emphasized the importance of the members using the medical library installed by the society in the Morristown Library; registering when they visit the library so that some dependable record may be kept of the extent to which the various periodicals, reports, etc., are used by the members; and encouraging its greater use if its continuance is to be justified.

Election of officers for the year 1928-1929 resulted as follows: President, L. L. Mial; Vice-President, L. M. Collins; Treasurer, George B. Emory; Secretary, George H. Lathrope; Reporter, Marcus A. Curry; Historian, H. W. Kice. Additional Members Executive Committee: Drs. Haven, McMurtrie and Carberry. Annual Delegates to State Society Meeting: Drs. Costello, Emory, Williams. Alternate Delegates: Drs. Gordon, Thomas and Knowles.

The change of Treasurer was with reluctance to lose the painstaking and very efficient service of Dr. F. Grendon Reed and the change in the recommendations of the Nominating Committee was made only because it was thought unfair and, perhaps, just a little unappreciative, not to yield to his wish so sincerely expressed to be relieved, after several years of devotion to the office. Dr. Emory was substituted on the roster of the Nominating Committee and elected as the type of man to maintain the high standard of his predecessor.

The death, on July 7, of Dr. William J. Summers, of Boonton, was brought officially before the society and by action duly taken the President appointed Drs. Peck and F. Grendon Reed as a committee to draw up and submit a suitable resolution.

President Haven announced that it is customary at this time for the retiring President to present a sort of formal address and that he had prepared a few brief remarks which he would read. Dr. Haven's subject was "Clinical Medicine and the Laboratory" which pointed out some of the ways we can bring these 2 branches in closer rapport, and drew attention to and emphasized the points at which the 2 should meet. President Haven's remarks were very interesting and were absorbed with close attention.

The place in the program of the Society for Clinical Reports was emphasized by the President that it is specified in the by-laws, and that

anyone having a case he wished to talk about or report was invited to do so and they would be gladly received. Drs. Flagge and Christian accepted the invitation and related cases that were most interesting.

Superintendent Curry, of the Greystone Park Hospital, thanked the President and the members of the society for honoring us by coming to the institution again this year for the annual meeting and urged the members to make more use of the institution; calling attention to the progress in construction during the past 8 or 10 years; that the new Reception Building compares very favorably with anything of the kind in the country; referring to a visit of a representative from England who had traveled considerably over this country beside in England and who stated that he hadn't seen anything in his travels to compare with our new Reception Buildings; and giving descriptions and details of other buildings for patients, as well as for employees; explaining the régime for patients; that he is extremely anxious to see the Morris County Medical Society make more use of the institution and have a better knowledge of what is going on at the institution; that he felt we have an institution and a medical staff that can be compared very favorably with any in the country in this line of work and for that reason the backing of our county people is desired so that they may know from actual experience what the men are doing at the institution; that it might be interesting to know that Dr. Pitkin, of Bergenfield, a member of the consulting staff, does a great deal of work with spinal anesthesia; that Dr. Collins, of the hospital staff, has started on this method and so far as known to him, this is the first institution for mental diseases to start with this form of anesthesia for major operations, and it is working very well; that if the members of the society care to have a clinic put on, it can be arranged with Dr. Pitkin and Dr. Collins to have a clinic on this spinal anesthesia.

The members and guests accepted the invitation of the Superintendent for refreshments in the cafeteria where a very appetizing supper was served and enjoyed.

OCEAN COUNTY

George W. Lawrence, M.D., Reporter

The annual meeting of the Ocean County Medical Society was held in Lakewood, October 10, beginning with a banquet at 6 p. m. at the Laurel Restaurant. After being well fed, the meeting was called to order by the President, Dr. Bunnell, of Barnegat.

Dr. Tobin, Secretary, read the minutes of the preceding meeting, at which time new by-laws were adopted and Drs. Willis, Hilliard and Carmona were elected to membership.

After minutes were adopted, an oral report of the Delegates to the Annual Meeting of the State Medical Society was made by Drs. Jones and V. M. Disbrow.

Applications for membership were received from Dr. Stilwell, of Lakewood; Dr. Sawyer, of Toms River, and Dr. Halbach, of Lakewood. These names were referred to the Credentials Committee, to be reported upon at the next meeting.

The Treasurer's report showed a good condition of finances and a vote was taken for the

cost of the banquet to be paid out of the balance on hand.

A discussion was had in regard to the value of diphtheria toxin and antitoxin inoculation and, after free discussion, motion was made and carried to endorse the action of the State Society in its use and to cooperate in every way possible to carry out the program.

Election of officers resulted as follows: President, Theodore T. Thompson, of Lakewood; Vice-President, Adolph Tobin, of Lakewood; Treasurer, Frank Brouwer, of Toms River; Secretary, Dr. Woodhouse, of Toms River; Reporter, George W. Lawrence, of Lakewood.

It being the opinion that the new rules permitted Ocean County to have 10 delegates to the State Society, the following were elected as delegates: Ralph R. Jones, Toms River; V. M. Disbrow, Lakewood; George W. Lawrence, Lakewood; A. Goldstein, Lakewood; Frank Brouwer, Toms River; Robert Buermann, Lakewood; Hilliard, Mannahawken; Frank Denniston, Pt. Pleasant; Woodhouse, Toms River; H. Disbrow, Lakewood. The other members of the society were elected as alternates.

Dr. Harold Disbrow then read a very interesting paper, "The Middle of the Road" (which will appear later in the Journal).

Meeting was then adjourned subject to the call of the President some time during the month of January, 1929.

PASSAIC COUNTY

John H. Carlisle, M.D., Secretary

The annual meeting of the Passaic County Medical Society was held October 11, 1928, at the Paterson Health Center. There were 45 members present in addition to a number of visitors. Dr. Tuers presided and Dr. Sidney Levine acted as Secretary pro tem. The minutes of the last meeting were read and approved.

The Censors reported favorably on the following physicians: Drs. A. G. Markel, David Polowe, Harry Wolfson, Anthony E. Cortese, W. W. Sutherland and H. L. Wenger. They were unanimously elected to the society.

Dr. Bohl, as Chairman, reported for the Nominating Committee for officers for the year 1929: President, William Spickers; Vice-President, J. P. Morrill; Second Vice-President, J. H. Carlisle; Secretary, Frank Ash; Treasurer, S. M. Gianora. On Dr. Mitchell's motion the above officers were elected for the coming year (1929). Dr. Tuers was then elected a member of the Board of Censors which will consist for 1929 of Drs. Mitchell, Hagen and Tuers.

The Treasurer's report was postponed until the November meeting.

Under new business, a letter was read from The Paterson Evening News soliciting an article to show the work of the society. Dr. Morrison, Secretary of the State Society, was in accord with the project but felt that no such article should come from an individual or bear his name but should merely state what the county society was doing. It was moved that a committee be appointed to investigate and report at the November meeting. This committee consists of Drs. Manly, Dwyer and Tuers.

The scientific program consisted of a paper by Dr. S. T. Snedecor, of Hackensack, N. J., on "Physiotherapy in General Practice and Hospital Service". He illustrated his equipment

and methods by means of stereopticon views. A general discussion by the members of the society followed.

Dr. J. B. Morrison, Secretary of the State Society, was present and spoke on the work of the county society. He urged full attendance at meetings and support of the antidiphtheria campaign. Dr. McBride, First Vice-President of the State Society, was also present and spoke.

The election of Annual Delegates was postponed to the November meeting.

The society then adjourned for a collation at which over 100 members and their wives had an enjoyable hour.

SALEM COUNTY

William H. James, M.D., Reporter

The annual meeting of the Salem County Medical Society was held at the Memorial Hospital, Salem, N. J., on Wednesday, October 10, at 2 p. m. The regular business of the meeting was transacted, after which Dr. O. Baker, of Pennsgrove, was elected a member.

The following officers were elected: President, William H. James, Pennsville; Vice-President, L. H. Hummel, Salem; Secretary and Treasurer, David W. Green, Salem; Reporter, William H. James, Pennsville; Censors, C. L. Fleming, Pennsgrove; J. M. Summerill, Pennsgrove, and William H. James, Pennsville; Annual Delegate to State Society, W. L. Ewen, Salem; Alternate, William H. James, Pennsville.

The meeting was very poorly attended as several members were out of town and others failed to attend.

There was no essay so the meeting was carried on with a general discussion of various subjects; the principal one being how to make the meetings more attractive, and in a general way how to interest absent members so that they would attend the meetings.

At the conclusion of the meeting, the society enjoyed a splendid dinner at Hotel Johnson, and determined to meet again December 12 at 2 p. m.

SOMERSET COUNTY

Lancelot Ely, M.D., Reporter

The Somerset County Medical Society held its annual meeting at the Raritan Valley Country Club, Somerville, on October 11. A large number of the members were present. The election of officers resulted as follows: President, C. R. Kay, Gladstone; Vice-President, A. A. Lawton, Somerville; Secretary, Benjamin Borow, Bound Brook; Treasurer, R. F. Hegeman, Somerville; Reporter, Lancelot Ely, Somerville; Annual Delegate to State Society, A. A. Lawton; Alternate, Josiah Meigh; Member of Board of Censors, R. L. Stillwell.

Dr. Ely, Chairman of the Antidiphtheria Campaign for the county, spoke of the plans of the campaign, and the society made an appropriation toward expenses of the work.

The annual dinner was enjoyed by the members and 14 members of the Woman's Auxiliary as guests. Dr. Mulford and Dr. Morrison were guests of honor and their respective talks on subjects of interest were fully appreciated by all present.

UNION COUNTY

Russell A. Shirrefs, M.D., Reporter

The annual meeting of the society was held on the evening of October 17 at Overlook Hospital, Summit. Dr. Frederick W. Sell, of Rahway, presided over the large gathering. In the afternoon there was golf and cards, and at 7 p. m. a fine dinner was served at the Canoe Brook Country Club for members and guests.

An interesting clinical program included the following features: Drs. Thomas and Prout reported a case of "psycopathic personality" in a woman who had duped several prominent hospitals as a pathologic fabricator of remarkable versatility.

Dr. R. W. Moister presented a "blue" baby of 4 months, suffering from marked gastro-intestinal disturbance, whose cyanosis was probably due to a partially obstructed pulmonary artery, or a patent foramen ovale. A girl of 10, with Osgood-Slatters disease, showed a separation of the tuberosity of the tibia from its shaft, affecting both knees, without history of trauma; treated by plaster casts.

Dr. M. G. Bensley presented a woman, 33, who some months ago received a bullet wound of the left thigh. A large arteriovenous aneurism resulted. A Mattas' operation with ligation and partial removal of the femoral artery effected a cure. A man with an extensive fracture of the skull was restored to useful activity by a decompression operation. A boy with claw hand following a severed ulnar nerve and tendons of his left wrist, was cured by an operation reuniting the cut nerve and tendons.

Seven years ago, Dr. H. H. Bowles removed a polycystic kidney the size of a child's head from a woman, aged 45, who has since remained well. Eminent authorities say that the other kidney is usually affected within 4 years. During setting-up exercises a boy suffered partial dislocation of his atlas from the axis. Under ether, a reduction was successfully effected by manipulation (without the aid of an osteopath!) A healthy looking man of 42 was presented; after a herniotomy last February, and removal of an enlarged left testicle which proved to be an encephaloid carcinoma. A marked metastasis in the abdomen has completely disappeared following deep x-ray therapy. Dr. Bowles also showed a calcium oxalate crystal the size and appearance of a chestnut burr which he had removed from a man's bladder. A boy with a severe osteomyelitis of the tibia due to streptococcus hemolyticus was restored after operation by packing the cavity with vaseline gauze every 2 weeks under a plaster cast, as advised by Orr of Kansas City.

Dr. C. B. Keeney presented a man, 78, who had pernicious anemia; 1 transfusion, a liver and kidney diet, and cutting down the carbohydrates and fats effected an apparent cure.

Dr. Tator showed a girl, 10, operated on for gangrenous appendix, whose stormy convalescence weathered an empyema with rib resection, a rectal abscess which burst through the vagina, and a double cervical adenitis. Colon bacillus vaccine aided her final recovery.

Dr. W. B. Morris exhibited a ruptured abdominal aneurism taken at autopsy from a woman who lived several hours after its rupture. He also reported a pelvic abscess and peritonitis in a woman, 43, who recovered without operation after the abscess discharged through her umbilicus.

Dr. N. W. Burritt exhibited patients who had severe otorrhea and who had recovered with regenerated drums within 30 days after the removal of infected teeth, discovered by means of transillumination. Another instance of double retrobulbar neuritis soon recovered his sight after the extraction of 3 bad teeth.

Dr. J. E. L. Imbleau reported a serious case of pyloric stenosis developing 3 days after birth. The infant recovered under treatment with tincture of belladonna.

At the annual election the Nominating Committee submitted the following names for the consideration of the society, and they were unanimously elected: President, Alfred F. Van Horn, Plainfield; Vice-President, Harry H. Bowles, Summit; Secretary, George Horre, Elizabeth; Treasurer, Alden R. Hoover, Elizabeth; Reporter, Russell A. Shirrefs, Elizabeth; for Censor 1928-1931, Norton L. Wilson, Elizabeth; for Members of Public Health Relations Committee (term of 3 years), Horace R. Livengood, Elizabeth, and George W. Strickland, Roselle, for Member of State Nominating Committee, James S. Green, Elizabeth.

The committee also recommended that the election of Annual Delegates be postponed until the meeting of April, 1929, and that the Secretary be instructed to have "return" postal cards printed as follows: Dear Doctor,—If elected an Annual Delegate to the State Society, will you, as far as is now possible, pledge yourself to attend the next meeting of the State Society? Yes.... No....

The address of the evening was made by the retiring President, Dr. Frederick W. Sell, who spoke on "The Relation of the General Practitioner to Various Neuroses".

Treasurer Hoover (where have we heard that name before?) gave an account of our finances and reported that there were 190 paid-up members. Dr. S. F. Myers, of Plainfield, was granted a transfer on removal to Essex County.

A letter from the Y. M. C. A. of Elizabeth proposed to install ultra violet ray apparatus for the use of its members, and solicited our approval of such action. The matter was referred to the State Board of Medical Examiners for an opinion as to the wisdom and legality thereof.

Four proposals for membership were received for action at our next meeting; and the following 7 physicians were enrolled: I. Gelber, Union; E. W. Weigel, Plainfield; E. N. Davidson, Linden; A. Breslow, Elizabeth; J. J. Labow, Elizabeth; A. Kushner, Rahway, and J. J. Reich, Newark.

At the end of the meeting light refreshments were served.

Summit Medical Society

William J. Lamson, M.D., Secretary

The regular meeting of the Summit Medical Society was held at Wallace Pines on Tuesday, September 25, 1928, at 8:30 p. m., Dr. Dengler entertaining, and President Krauss in the chair. The members present were Drs. Bowles, Burritt, Campbell, Dengler, Disbrow, Eason, Johnston, Krauss, Lamson, Larrabee, MacPherson, Meeker, Meigh, Milligan, Moister, Morris, Prout, Reiter, Smalley and Tator. Dr. Allis, of Basking Ridge, and Mr. Richards, of the Elizabeth Board of Health, were present as guests. The minutes read and approved.

Dr. Charles V. Craster, President of the New-

ark Board of Health, addressed the society on some problems of general health along preventive lines, in which the general practitioner could and should actively cooperate with Boards of Health, but had signally failed to do so.

For example, the examination of food-handlers by physicians was generally done in a perfunctory manner, without any thoroughness, and the certificate of health was practically valueless. Physicians were also generally careless in pronouncing a cure in cases of gonorrhea or syphilis in people contemplating marriage. Too frequently, also, certificates of ill-health or disability are given to patients for some trivial illness or minor injury in compensation cases, which is unfair to employers.

He cited laws for Child Welfare which protect the physician in insisting on proper treatment for children whose parents neglect to care for them. He urged the general physicians to be more militant in preventive measures, such as antidiphtheria work and annual health examinations and other preventive health measures which have been generally accepted as advisable, and said that the general public was rapidly being educated to demand these things of physicians, and that they should keep at least one step ahead of the laity.

The paper was discussed by Drs. Dengler, Campbell, Allis, Meigh, Lamson, Prout, Krauss and Mr. Richards.

The meeting then adjourned, after which refreshments were served.

Clinical Society of Elizabeth General Hospital

Russell A. Shirrefs, M.D., Reporter

Thirty-seven years ago, Mrs. J. developed a sarcoma of the leg. She was then successfully operated on by Dr. Victor Mravlag, of Elizabeth, who did the first hip-joint amputation ever attempted in that city. The patient fortunately lived for 26 years thereafter. Shortly after her immediate recovery from this major operation and in celebration of her happy convalescence, Dr. Mravlag tendered a dinner to his associates on the staff of the Elizabeth General Hospital. This dinner marked the inception of the Clinical Society of the Elizabeth General Hospital and Dispensary, and Dr. Mravlag was unanimously chosen its first President. The society ever since has had an annual dinner (as well as monthly meetings) and for many years the banquet was personally given by the retiring president, until the large list of members made it a heavy financial burden—since when it has been a subscription affair.

The 37th annual meeting of the Clinical Society, which now numbers 90 past and present members of the Elizabeth General Hospital staff, was held at the exclusive Essex Club in Newark on the evening of October 23. Dr. John E. Runnells was chosen President; Dr. M. Vinciguerra, Vice-President; Dr. Harry Bloch, Secretary, and Dr. Emil Stein, Treasurer.

Professional entertainers added to the pleasure of the evening, which was also marked by a hearty feast of reason and flow of soul. In addition, the younger members of the resident and visiting staff distinguished themselves by pleasing vocal and instrumental selections and humorous informal talks. The festivities were concluded at a late hour, after sending a tele-

gram of greeting and felicitation to Dr. Mravlag, who is spending the sunset days of a very active civic and professional life in quiet retirement at his home.

WARREN COUNTY

F. A. Shimer, M.D., Reporter

The annual meeting of the Warren County Medical Society was held at the Hotel Belvidere, Belvidere, N. J., at 11 a. m., October 16, 1928, Dr. Homer Bloom presiding. Members present: Drs. H. Bloom, L. H. Bloom, C. H. Bloom, Lefferts, Albertson, Bossard, Cummins, Drake, Shimer, Osmun, Tunnison, Smith, Hackett, Curtis, Lyon and McKinstry. The minutes were approved as read.

Dr. J. J. Quiney, of Easton, Pennsylvania, read a paper, illustrated with lantern slides, on "Gall-Bladder Disease." (To be published in the Journal.)

Dr. C. H. Bloom, of Easton, read a paper on "Otitis Media and Its Complications".

A rising vote of thanks was given to the readers of both papers.

Treasurer's report was received and filed on recommendation of the Auditing Committee.

Under the head of unfinished business, a resolution in writing was presented to make a change in the Constitution and By-Laws, to read as follows: "Annual meeting to be held the third Tuesday in October; the January, April and July meetings on any Tuesday." This resolution was laid over until our next meeting.

Officers elected for the coming year: President, L. W. Hackett; Vice-President, Paul Drake; Secretary, L. C. Osmun; Treasurer, G. W. Cummins; Reporter, F. A. Shimer; Censor, C. H. Lyon; Delegate, Homer Bloom; Alternate Delegate, L. H. Bloom; Delegate to Nominating Committee, Homer Bloom.

Resolution on the death of Dr. Thomas Scott Dedrick: "Whereas death has called to quiet and peaceful rest our esteemed colleague, Dr. Thomas Scott Dedrick;

Therefore, be it resolved, that we do hereby publicly express our appreciation of his sterling qualities. He was a man of refinement and culture; modest and never selfassertive; deeply imbued with the responsibilities imposed upon him in his chosen profession; always tolerant of the opposing opinions of others and had a heart full of charity for the weakness and frailties of others. His presence brought sunshine and his smile sweet balm into the homes to which duty called him.

We shall miss him and our sympathies go out to the bereaved widow. May she see through her tears the nobility of his life as she has never seen it before, and be comforted; and be it further resolved that this resolution be spread on our minutes and a copy sent to the bereaved widow who has our sincere sympathy."

F. A. Shimer
(signed) G. W. Cummins
A. C. Zuck

We had the honor of having with us State Society President Ephriam R. Mulford and Secretary J. B. Morrison both of whom gave very interesting talks on county and state welfare work.

Last, but not least, we had a bountiful duck dinner, served between the acts, in the hotel dining room.

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A PLEA FOR THE EARLY RECOGNITION OF CANCER

EDWARD J. ILL, M.D.,
Newark, N. J.

(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 7, 1928)

When the request to read a paper on this subject came from the Chairman of our Scientific Committee, the writer was only too glad to acquiesce. Since the writer has been Chairman of the State Committee, appointed by the American Society for the Control of Cancer, it has been his constant desire to interest the profession in this important subject, but there has been great difficulty in getting the profession's interest in a subject which deserves our closest attention. It was difficult to get their attention until the people began to be instructed in the early symptoms. The writer is glad to say that at the present time the organized profession is vitally interested, recognizes early symptoms and demands a complete examination for the patient. We advisedly speak of the organized profession; those who do not belong to any county society, nor to a hospital staff are most difficult to reach.

The writer regrets to say that in spite of a very large amount of correspondence with the secretaries and presidents of the county medical societies of the state, soliciting their help in the efforts of the American Society for the Control of Cancer to educate the

people, his efforts were, with a few exceptions, not crowned with success. Certainly not with such success as the importance of this subject demands. In spite of all this, the writer has noticed a marked degree of intelligent understanding by physicians who formerly gave the early symptoms no attention. This is fortunate for the profession, for the laity is becoming well informed and demands thorough examination and an opinion. All this is due to the laudable efforts of the American Society for the Control of Cancer.

The writer trusts and hopes that this paper may assist in bringing forth new men who will offer to act as chairmen for their respective counties. Would the Woman's Auxiliary help us in this matter and present this subject to their various societies? Dr. Babcock told us last year of their splendid and efficient help in Pennsylvania.

The death rate from cancer of the pelvic organs as reported by the insurance companies is close to 25 per 100,000 population. The death rate from cancer of the liver and stomach is 28 per 100,000. There was a time when our teachers said that cancer hardly existed among the colored people. Today the death rate is 38.4 per 100,000 in the colored race. It is important to bear this in mind when colored women present themselves. Whether the death rate is on the increase, is exceedingly difficult to say. There certainly has been an increase in the number of cases reported. Possibly this is due to the fact of more comprehensive knowledge of the disease; i.e., more accurate diagnosis, but also in some

extent due to a general lengthening of life over the span of a generation ago.

Cancer is a disease of middle and late life. Insurance companies are increasingly studying the cancer mortality rate. Both the Prudential and the Metropolitan are vitally interested and are spending much money in study of the cancer problem, and perusal of their cancer publications is of great value.

They are by no means sure that there is a general increase. Their studies mean dollars and cents to them. They tell us that \$1 out of every \$11 paid out in death claims is on account of this disease. One company, in particular, claims a larger amount paid for cancer deaths than for any other cause excepting tuberculosis, heart disease and accidents. It is important that we as practitioners of medicine should know this since our reputation with these companies is at stake, if we do not inform ourselves concerning early symptoms.

Bland Sutton says that "the means required for elucidating the nature of cancer, facilitating its clinical recognition and treatment, remedial or palliative, are receiving attention from able investigators". The physical sciences, the pathologic and biologic laboratories are of incalculable help and must not be lost sight of. However, all this will not supplant the physical and clinical examination of the patient. The latter must ever be in our minds. The writer is not underrating the laboratory. It must, however, be considered only as corroborative. The laboratory and the microscope are subject to failure in the ablest hands. The laboratory finding must go hand in hand with the clinical finding, to be of value. For instance, the curettings from the cavity of the uterus may fail to show carcinoma, while the clinical evidence is entirely prejudicial to carcinoma, and repeated curettings may eventually show carcinomatous tissue. If there is a failure to corroborate the clinical findings, the writer takes no chance; he removes the organ. Nor has he often failed to show that the clinical findings were later corroborated by the microscope.

It would be difficult to speak of early recognition without rehearsing the early clinical symptoms. It is not the writer's purpose to

enter into a long discussion of the whole question of symptomatology of cancer of the female pelvic organs, but only so far as it relates to early symptoms. Nor is it his purpose to speak of what has been called the pre-cancerous stage; at best, this has been a vague term invented to cover our ignorance. Let us remember that a chronic irritation predisposes to cancer, no matter where it is. We must not forget that so far as the nature of the disease is concerned we know little more than did Virchow, Billroth or Waldeyer of 2 generations ago. The little more we know is of the relative malignancy. We also know that the earlier we recognize the disease the greater the probability of a cure, or at least a prolongation of life. It is, therefore, our particular duty to inform ourselves regarding the earliest symptoms, and inform the people about these symptoms. There is no fear of producing a cancer phobia, for as soon as we assure our patients of their safety they are most grateful. Unless we ourselves are on the alert, constantly looking for these symptoms, we are getting nowhere with all the work and study of the scientific world.

In discussing the early symptoms of cancer in the female pelvic organs we must also consider those of the bladder and rectum. We may divide the symptoms of carcinoma as of: (1) the external genitals; (2) vagina; (3) cervix; (4) body of uterus; (5) the ovaries; (6) bladder and rectum.

Cancer of the pelvic organs is secondary in number only to cancer of the stomach and liver. Cancers of the external genitals are mostly of the group known as epithelioma, and begin as a small sore with a friable center and edges raised above the surrounding tissue; at this stage it is thoroughly amenable to treatment. The prognosis becomes doubtful or bad as soon as there is glandular involvement in the groin. Pain is a very late symptom. Pain in cancer is nearly always a late symptom and stands for a bad prognosis. Therefore, do not look for pain as a symptom of cancer, except for its hopelessness. Cancer of the vagina is so rare that it need not keep us at this moment, particularly as the

subjective symptoms are identical with those of carcinoma of the cervix.

An early symptom of cancer of the cervix often noted is a slightly bloody discharge after sexual intercourse, and this is most apt to occur in the hypertrophic form. The main subjective early symptom is a bloody-watery discharge. Odor is a late symptom. Unfortunately it takes a comparatively intelligent woman to recognize such a discharge as abnormal, but we as practitioners should ever be on the alert to recognize it. When such a discharge occurs after the menopause it means carcinoma; only rarely a mucous polyp. It is no joke to speak of a recurrence of youth. On examination, a friable, easily bleeding, ulcerous mass is readily discovered. A sharp curette will gouge out a piece as it would out of a piece of friable cheese. That symptom, with the rarest exceptions, makes the diagnosis sure. The disease is rare in nullipara. The writer has not seen a case of cancer of the cervix in a virgin for many years, while in the parous woman it is of daily or weekly occurrence. Carcinoma in the cervical canal should be looked for carefully. Cancer of the body is a little more difficult to recognize. Again, we have a pinkish, dirty-gray watery discharge, which can be seen to flow from the cervix. Careful aseptic introduction of a sound may produce copious bleeding. The curette brings away friable granular hard tissue. The microscope may assist in the diagnosis if cancer tissue has been removed. The writer says "may" advisedly because non-malignant tissue may have been removed. The diagnosis of rapidly growing fibroids after the menopause should be looked at with suspicion. Fibroids, per se, do not become cancerous. Fibroids do not grow after the menopause. Carcinoma of the ovaries usually brings the patient to us because of a lump in the lower abdomen, which she has not noticed before. A combined examination will show a fixed mass, usually on both sides of the uterus. There is apt to be free fluid in the abdomen early. The feel of the masses is that of hardened tripe among nodular masses. A rectal examination will verify this.

It is not the writer's purpose to go into the

pathology or treatment of these various forms of carcinoma; there is so much more to say than a paper limited to 20 minutes can encompass. Cancer of the urethra also shows early by bloody urine and bloody discharge from the urethra particularly on pressure. The same can be said of cancer of the bladder. The endoscope alone will make the diagnosis. A catheterized specimen of urine from the bladder shows blood and a grumous matter which, under the microscope, is shown to be pus and broken down tissue. Pain is rather an early symptom. It is enough for us to know that a woman with bloody urine needs a cystoscopic or endoscopic examination. Lastly, the writer wants to say that no pelvic examination is complete without a rectal touch. If masses of feces are felt, a glycerin injection should be given on the spot, thus emptying the bowel, and the examination can be proceeded with. If a friable, hard, bleeding mass is made out with the finger in the rectum the diagnosis is made. An x-ray picture of a mass beyond the finger may give us some information, but it is useless for carcinoma within 6 inches of the anus.

The writer has placed this matter of early recognition before you in as short, concise and practical way as he is able to do. He hopes it may lead to early diagnosis and thus to a saving or prolonging of many lives. He also begs for a thorough discussion so that moot points will be brought out to the advantage of all of us. The time has passed when we can say there is nothing to do for the patient except to hope for an early and easy death. Sir Thomas Horter truly says: "Cancer is becoming a controllable disease." The writer wishes to add that we hear only of the deaths but never of those who have gotten well and are enjoying life.

DISCUSSION

Dr. David A. Kraker (Newark): I would like to urge, following Dr. Ill's paper, that the profession adopt the practice of making a routine rectal examination upon each of their patients who demonstrates the slightest gastro-intestinal or rectal difficulty. Cancer of the rectum occurs more frequently than any other form of cancer except that of the stomach, it is less frequently recognized in its early stages and frequently cases come under my observation that have been treated for gynecologic conditions and the doctor entirely ignoring

the pathology existent in the rectum; such mistakes are very costly to the patient and in most instances are due to this very glaring reluctance of the physician to make a rectal examination.

The usual method followed when a patient complains of bleeding or pain in the rectum is for the physician to administer some ointment and make a diagnosis without examination, practically using absent treatment. Bleeding from the rectum is a signal of danger, and a digital and proctoscopic examination should be made in every case in which there is complaint of these symptoms. The use of the proctoscope should be general and a physician should train himself to recognize abnormalities of the mucous membrane of the rectum and sigmoid at a glance. If this practice is carried out many cases of early malignancy will be recognized and efficacious treatment will be possible.

Dr. Penn: The medical profession of New Jersey owes a debt of gratitude to Dr. Ill as a pioneer in the work of control of cancer in our midst. There is no man connected with the medical profession who has done more or exerted more personal effort than he to aid in the control of cancer. In the registered areas of the United States today there are 100,000 deaths from cancer, and at the same time we have these 100,000 deaths, we have 300,000 ill from the same disease. The only hope of cutting down that death rate, as Dr. Ill stated, is by an early diagnosis of the disease.

Considering the types of cancer which he discussed in his paper, types affecting the female genital organs and the rectum, the diagnosis in many cases is made very late. I think the 2 things that obscure the diagnosis in both conditions are: first, the terms "change of life", which applies to the cessation of menstruation in the female, and "hemorrhoids" as regards the rectum, both male and female. It is a pretty commonly accepted idea among the people that any sort of irregular bleeding about midlife in the female is due to the change of life. It doesn't matter that the female has been previously regular for all time, when she first starts to bleed a little every day and keeps that up, she meets a neighbor who says, "Don't mind that, that is the change of life," and this often causes her to go to the doctor too late for any help. The same applies to the woman who has a normal cessation of menstruation and after a year or two suddenly starts to bleed again. She consults some of her friends who tell her the same thing, "It is only the change of life"; and so we go on with that merry circle.

I think the one way, and it has been recently developed, especially by the American Association for the Control of Cancer, is to disseminate knowledge among the people, by the press and in every way possible, to show that irregular bleeding at the time of midlife in the female is not normal. At least it is a pathologic condition grave enough to have her consult a physician and find out the cause. Until that is done, we surely cannot hope for much earlier diagnosis of cancer.

Of course, there is one other point to be accentuated, that this fact must be stressed among the medical profession, for some of our members are a little apt to pass over irregular bleeding after menopause. If we are to get early diagnosis of cancer of the uterus, we certainly must have the doctor make an examination not only with the finger, but must once in a while use the speculum and take a look at the cervix. What we cannot get from the history of the patient, we can very often get from the sense of our index finger, and also from the observation of our eye.

As regards what Dr. Kraker said about the rectum, the thing that obscures that, and not so much among the lay people as among the doctors, is the fact that so many people come complaining of bleeding from the rectum; it may be at the time of stool, or between times. In a great many cases it is put down as hemorrhoids. As proof of that fact, we need only take the records from the largest surgical clinics in the United States. As applied to the rectum, we find the records show in the large surgical clinics a minimum of 30% of the cases of cancer of the rectum come to the clinics inoperable, in some clinics as high as 50%, others 70%.

Before we can hope for an early diagnosis of carcinoma of the rectum, the physician must instill in his own mind the fact that it is necessary to use his index finger in the rectum. As Dr. Kraker has said, he must provide a proctoscope or sigmoidoscope—not necessarily a sigmoidoscope, but a proctoscope will do in most cases. He can feel a lot he can't get from his history, and he can see a lot he can't get from his history.

With those 2 things, which cover the scope of Dr. Ill's paper, if the lay public are educated a little more to these irregularities, if the medical profession is made to be a little more exacting in the matter of examination, we may hope for the day when we may get an early diagnosis of malignancy in these conditions, and with the hope that proper treatment may give us a lower mortality and a lower death rate from this terrible disease.

Dr. J. T. Stevens (Montclair): I didn't hear Dr. Ill mention one symptom which is of extreme diagnostic importance. When a patient begins to have uterine bleeding again after once having passed the menopause, this is always cancer and should be treated as such even though the diagnostic curettage fails to demonstrate cancer.

Dr. Edward J. Ill (Newark): I want to make a particular plea that whether curettage shows it or not, the clinical condition alone would be evidence of the carcinoma of the body of the uterus.

What I was hoping for was that someone would suggest how we are going to get hold of the profession, who do not belong to county societies and who do not belong to any hospital; those are the men we can't reach. There must be some way in which they can be reached. How it can be done, I don't know.

RECENT ADVANCES IN GYNECOLOGY

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(An address delivered at the Annual Meeting of the Medical Society of New Jersey, held at Atlantic City, June 7, 1928)

In response to the request of the Chairman on Program, inviting me to discuss with you some of the recent advances in gynecology, I do so with considerable hesitancy for I am conscious that I can add little or nothing to your theoretic knowledge of gynecology or the

treatment of its several lesions, but perhaps I may be able to clarify and crystalize for you some of the present-day views on pathology and clinical practice and so place you in a better position to fulfill the obligations required of you in your daily work.

A surgical furor has seized the profession; the small hospital, which is usually an open hospital, is the workshop for the surgeon and would-be surgeon, and with this, gynecology is, at least in the smaller communities, passing out of the hands of the specialist into those of the general surgeon; with the result that many needless as well as many faulty operations are done to the discredit of a speciality which blazed the trail in abdominal surgery.

I have not the time to go into the history and work of those great pioneers McDowell, Sims, Tait, Emmet, Baer and others, who by their courage, conviction and vision made it safe to enter the peritoneal cavity. Suffice it to say that after 37 years of practice I am daily cognizant of the great debt we owe these men, and as my personal experience increases I become more and more conscious that what is classed as a great medical advance today is frequently a discard of some of these leaders.

Generally speaking, gynecology may be divided into developmental anomalies, infection, birth injuries and tumors but, unfortunately, infection may be coincident with or complicate any of these lesions. Furthermore, it is often forgotten that developmental lesions in the urogenital tract are but a single instance of general hypoplasia, and that their correction without consideration of the associated endocrinology may be of little benefit to the woman or may further disturb her endocrine unbalance.

The greatest advances which have been made during the past decade are in the treatment of dysmenorrhea, infections, birth injuries, sterility, fibroids and in the prevention or cure of cancer.

Over one-half of the lesions peculiar to women have their origin in childbirth. These are illustrated by the traumas, descensus, cervical infections and displacements—all the direct result of faulty obstetric practice; while

three-fifths of the remaining 50% are the direct result of some infection.

Dysmenorrhea, or painful menstruation, is one of the most troublesome lesions in practice—truly a symptom but often considered as a disease. Primarily dysmenorrhea (intrusive) is usually part of the clinical picture of general hypoplasia. There is a lesion, illusive as this may be, either in the endometrium, uterine wall, or the ovary which supplies the procreative impulse. Only by a careful study of the sequence of symptoms can a conclusion be arrived at. We have tried everything which has been suggested and have had our failures as well as our successes. Uterine dysmenorrheas of the developmental type found in the ante-flexed, retroflexed uterus, and the acute flexion with fibroid rests have yielded to gradual dilatation and mild irradiation. After thorough dilatation of the cervix with Hagar's sounds, 50 mg. of radium properly filtered is placed in the uterine cavity for a period of 4 hours, a dosage of 200 mg. hours. This does not stop menstruation, but for some unexplained reason relieves the pain at subsequent periods. Several of these women have later become pregnant. All other cases come under the head of extrinsic lesions with a pathology outside of the uterus; either in the parametrium, tubes, peritoneum or ovaries; while displacements with pelvic varicosities make up the final group.

GONORRHEAL INFECTION

The initial symptoms of gonorrhoea in the female are usually less acute than in the male, in fact it is often subacute or chronic from the beginning showing few local symptoms except an increase in vaginal discharge—yet chronic gonorrhoeal infection is capable of producing greater ravages and more permanent pathology than almost any other form of pelvic infection. The acute passes rapidly into the subacute or chronic stage, which is found located in Skene's glands just within the meatus, on the floor of the urethra, or as a chronic endocervicitis in the racemose glands within the cervix. Undisturbed, a cervical gonorrhoea remains a local disease and terminates in a pathologic entity known as a cystic

cervicitis, which is, however, always attended by a tissue hypertrophy with increase and change in character of the cervical discharge. Gonococci usually cannot be recovered from these chronic cervical lesions; yet active surgical treatment not infrequently spreads the infection to the endometrium and through the tubes. Skene's glands, on the other hand, harbor these cocci, perhaps somewhat changed in morphology but always ready under proper stimulus and virgin contact to relight and reinfect; which explains the frequent exacerbations in so-called chronic gonorrhoea—in reality reinfections. It is now a well recognized fact that the gonorrhoeal cervicitis is intractable and can only be cured by glandular destruction or glandular ablation. It has furthermore been demonstrated that no other single condition is so frequently the cause of sterility as is endocervicitis, and that infection may be spread to the parametrium, tubes and peritoneum by intracervical and intra-uterine instrumentation with the dilator, curet or stem. A few years ago these lesions of the cervix were treated with iodine, phenol and tampons; then, as a result of the writings of Leopold Sturmdorf and others, it became fashionable to excise the cervix; this, in turn, has been followed by the general acceptance of the electric cautery; but time has shown that none of these therapeutic measures can be relied upon to relieve the woman of her leukorrhoea or destroy or remove the entire glandular area which supplies the cervical mucus. Furthermore, operation upon and cauterization of the cervix are not curing sterility; as the latter seems to change the character of the remaining mucoïd discharge, while the former removes the cervix from its position in and its relation to the fornices and the seminal pool; and that excision and amputation have a definite influence upon the development and character of subsequent pregnancies and labor must be admitted by even the most enthusiastic advocates of these procedures.

LACERATIONS

Birth injuries occur even in the most expert hands and the greatest difference between the midwife and the doctor is that in a case conducted by the former there is submucous

fascial stretching and muscle injury, while in the case delivered by the physician the injuries are open wounds. This, perhaps, explains why physicians have a larger percentage of infections than the less educated midwife. Certain obstetric fundamentals seem to have escaped the mind of the physician soon after his graduation: First, that labor takes time. Second, that the baby cannot come out before the cervix is open. Third, that wounds, especially traumatized wounds, are liable to infection and do not heal per primum. There is a general trend at present toward the immediate surgical treatment of all birth injuries, but, while this is most commendable in pelvic floor and fascial tears, we are not convinced of the safety of or the necessity for suture of every cervix wound. Such teaching is not free from danger in the hands of the average practitioner, for few realize that at the termination of labor the uterovaginal tract is an open wound, and, owing to the severe traumatism which these tissues have sustained, has a lowered resistance against infection and is, therefore, more prone to inoculation from the vaginal flora and to the development of consecutive infection. We subscribe to the immediate repair of birth injuries when there is little trauma or edema; and to the intermediate repair on the seventh day, of old injuries or new ones, when there has been an operative delivery. These repairs are definitely surgical procedures which require the most perfect asepsis, knowledge of the pathology and the avoidance of all tissue constriction by suture material. Could we secure the coaptation of such tears without tension in non-edematous tissues, primary cervical repair would result in a condition similar to that which obtained before delivery.

It is generally accepted that cervical injuries predispose to the development of cancer; likewise, the presence of erosions favor malignant changes; yet the fact must not be lost sight of that all repair work is subject to some degree of destruction at subsequent births. Hence, it is the present obstetric and gynecologic policy to take care of the inflammatory lesions in the cervix by appropriate postpartum care and postpone operative procedures until a time

when the woman has finished her childbearing. Postponement of cervical repair would always be possible if dilatation was accomplished by the physiologic factors which enter into the mechanism, and were it not for the impression that has gained support among the rank and file that the cervix can be dilated by other means than those supplied for the physiologic process. However, the fact remains that manual or instrumental dilatation is in fact manual or instrumental laceration; while dilatation as accomplished by time and the intact membranes leaves little injury to be repaired.

PRE-OPERATIVE PREPARATION

Dehydrated patients are benefited by intravenous infusions of glucose and many of those in whom the hemoglobin is low require transfusion. All patients should have 24 to 48 hours rest in bed before being subjected to operation. A high or exceedingly low white cell count, or a rapid blood sedimentation time, are bad operative prognostics; and, after operation, nature's demand for fluids, chlorides and glucose is being satisfied by intravenous infusion and copious hypodermoclysis. As a result, postoperative convalescence is consequently less trying and stormy.

STERILITY

Probably no condition has received so much painstaking study as has the question of sterility. Formerly it was empiric to dilate and curet the uterus of every barren woman; and numberless plastic operations on the cervix have been devised to offer a larger entrance to the passage of the spermatozoa. Fortunately, for woman, this is a thing of the past and now each patient who presents herself complaining of sterility is studied as to the peculiar cause, and these causes may be grouped under 6 headings: (1) Defective production of spermatozoa; (2) obstruction or hostility in the male passages; (3) faults of delivery and reception; (4) hostile endocervical secretions; (5) tubal occlusion; (6) defective ovulation.

It is apparent that in any cause of primary sterility the male party to the contract must

receive investigation prior to instituting or recommending any form of treatment for the female member. The potency of the male is best shown by the Huhner test (or examination of the spermatozoa in situ following coitus). This is not only simple and efficient but it also gives a clue to the location of trouble in the woman and the success of the particular coitus. Man may be credited with over 30% of the primary sterilities resulting from underdevelopment, hypofunction, atrophy, epididymitis, prostatitis, change in vesicular secretions, malformations or impotence. In the woman, endocervicitis takes first place. This lesion so changes the character of the cervical mucus that the spermatic elements of the male die of exhaustion before achieving their goal, i.e., entrance to the uterine cavity. Tubal infection and its sequels make up the next largest group in the causes of barrenness; for inflammatory involvement of the tubes or peritubal tissues is not alone the result of gonorrheal invasion but is a common sequel of operations upon the cervix, labor and abortion. Fortunately, through study of the pathology of these lesions, we have learned to correlate the history with the living pathology and so prognosticate to a certain degree what each form of infection will do.

Those patients in whom live spermatozoa can be demonstrated within the cervical canal or in the uterus, yet who do not conceive, may have their lesion higher up in the uterus, endometrium, tubes or ovaries. In 1919, Rubin demonstrated that it was possible to accurately and safely insufflate the tubes with carbon-dioxide gas and thus show their patency or impatency. With this fact ascertained, the function of the ovary and that elusive something which may be termed "sexual response", are the only other factors to be taken into consideration. The time of coitus and its relation to ovulation is now claiming considerable attention, for with isolation of the sex-hormone which Frank and Goldberger have recently demonstrated, it is possible to determine with accuracy, even in the absence of menstruation, whether or not the woman ovulates and the time at which ovulation takes place. Hence, a properly timed coitus may result in

impregnation. Ovarian hypofunction and low metabolic rates are frequently associated in these obese women. Hypofunction of the ovary, unfortunately, is little understood; cystic changes cause atresia of the follicles. Atrophy is often the result of prolonged septic infection; such an ovary may be seen without a single follicle or corpora on the surface. The large white ovary with thickened capsule, the result of chronic circulatory stasis, which is usually found low in the pelvis, has, in our experience, the greatest chances for developing an ovum which may become impregnated. Hence, it will be seen that more careful study of the physiologic acts of the elements and organs taking part in conception has placed the treatment of sterility on a more rational basis.

RETROVERSION

Retroversion associated with retroflexion and some degree of descensus, which always co-exists, is most commonly an acquired condition, for even if the original retroversion was congenital the partial torsion or twist in the pelvic veins will so engorge the uterus if continued for a long enough time that a pathology due to a circulatory stasis in all of the pelvic organs must be established. The blood supply of the pelvis was apparently developed as a protection against infection, a definite line of defense, for while it is luxuriant and the muscular contraction of the uterus propels the blood, there is only one valve in the entire venous circulation of the pelvis; hence, subinvolution and retrodisplacement will naturally add to this circulatory stasis and produce a permanent pathology in the organs, tissues and blood-vessel walls. It is my belief, therefore, that the development of an acquired retroversion with descensus or the exaggeration of a congenital backward displacement is a gradual but progressive process which always develops a chain of complications which are directly attributable to interference with the venous circulation and faulty uterine drainage; which in turn produces change in the pelvic tissues in the form of edema, hypertrophy and cell proliferation. Therefore we teach and practice *correction* and *retention* of retrodisplace-

ment. Congenital retroversion in virgins or in newly married women producing no symptoms, needs no local treatment. Special attention, however, should be given to the care of the rectum and pelvic colon in these women, as fecal stasis is a common cause of pelvic complications.

At the present writing there are more than 100 different operations and modifications of original procedures on the round, broad and uterosacral ligaments which are being practiced by the general and special surgeon for the cure of retroversion with most disappointing end-results. Congenital displacements or those congenital versions to which acquired flexions have been added are by far the most difficult to cure for so much depends on the degree of: (1) Cervical invagination; (2) position of the cervix and its relation to the vaginal axis; (3) length of the uterosacral ligaments; (4) inclination of the brim of the pelvis; (5) depth and inclination of the symphysis; (6) strength and development of the round ligaments.

When the accomplishment of a result depends upon the study and appreciation of so many different factors, is it a wonder that we often err in the selection of type of procedures or in the detail of technic? The operation for the particular case must be a "Mrs. Smith" operation, not a routine surgical procedure applied to different anatomic conditions. Probably with the exception of the curet or stem pessary no one gynecologic condition has caused more unnecessary surgery and all that this means in morbidity sequels and mortality, than have the many operations for retrodisplacement. There is an instrument known in history as a pessary (long since forgotten by some), which has many virtues that are unappreciated by our surgical friends. A pessary will cure an acquired retroversion if the uterus can be completely repositioned, and if there is sufficient muscular structure in the pelvic floor to hold the pessary in place. *The pessary does not correct a retroversion* but retains the *repositioned organ* in anteversion after the uterine misplacement has been manually or posturally corrected. It anteverts and raises the uterus in the pelvis by raising the upper part of the

posterior vaginal wall which makes upward and backward traction on the cervix. In the mechanics of the pessary, the posterior vaginal wall runs over the posterior or upper bar of the pessary as a pulley and draws the cervix upward and backward, while the anterior bar takes its purchase and rests on the pubic shelf behind the pubis, being retained in this position by the pelvic floor. In this way it acts as a scaffold in supporting the anterior vaginal wall.

If proper case were given the woman at her confinement, or at the time of her abortion, and during the postpartum and postabortal periods, over 80% of the retroversions going about the country, falling into the hands of operating surgeons, competent or incompetent, would be cured by palliative measures. Prior to 1910, in our follow-up clinic, the incidence of backward displacements which occurred in women who were discharged from the hospital on the fourteenth day with a uterus in antelexion or antelexed retroposition, was 38%.

In 1910, we began our postpartum studies by establishing a postpartum follow-up clinic. Each patient before leaving the hospital was instructed to assume the knee-chest position night and morning, and taught the "monkey trot" (walking on all fours) and told to return to the clinic *one month* from date of her discharge from the hospital. If at this visit the uterus was retroverted, it was repositioned and a properly fitting pessary adjusted to retain it in anteversion. The patient was then instructed in the care of the pessary, with a result that at the end of 3 months only 2% of our patients had uncorrected retrodisplacements.

Fewer and fewer operations are being done during the childbearing period. These remarks upon the advantages of the pessary would not be complete without mention of the contraindications. A pessary is contraindicated when any of the following conditions are present:

(1) A large relaxed introitus without sufficient muscular structure in the pelvic floor to hold a pessary in place.

(2) In lacerations of the cervix with

hyperplastic change and parametric inflammation in the base of the broad ligaments or in the uterosacral ligaments.

(3) In inflammation of the pelvic peritoneum.

(4) In the presence of prolapsed tender ovaries.

(5) In presence of posterior uterine adhesions limiting mobility of the uterus.

All parametric, peritoneal and tubo-ovarian inflammation must be quiescent, and all exudative processes completely absorbed before a pessary can be employed. The requirements imply the necessity of preliminary local treatment in the form of posture, douches, boro-glyceride packs, and, above all, *time*.

DISCUSSION

Dr. Thomas B. Lee (Camden): It is a very difficult matter, I find, to open the discussion of a paper by Dr. Polak. On the one hand he leaves very little for one to say, and on the other hand Dr. Polak has been so closely identified with the progress of gynecology in the last few years that one would have temerity, indeed, to disagree with him. The few words I shall say will be in the nature of a supplement.

Dr. Polak, I am very happy to say, mentioned the question of the use of x-rays in dysmenorrhea cases. I have used them in a few cases with rather satisfactory results, one-fourth erythema dose of x-rays. The radium I have been afraid to use because so many of these hypoplasia cases have an amenorrhoea. I have been afraid that a woman who doesn't menstruate very freely and sometimes not as frequently as normal, might stop altogether. So, I have been watching the reports of such cases before using it in my own cases.

The x-rays I have found to be satisfactory, although not at all a specific. Dr. Polak said the most important work or very important work in progress in gynecology had been done in the matter of endocervicitis, and I think this is absolutely true.

The doctor has so fully covered the ground of specific endocervicitis that I am going to say a few words to you about the non-specific endocervicitis, hoping to draw from Dr. Polak some opinions regarding this very important matter. I think it is safe to say that in the average case a persistent leukorrhoea means endocervicitis. I think it is true we have endocervicitis without leukorrhoea or much leukorrhoea. I think it is also true we may have leukorrhoea without endocervicitis, but for all clinical purposes, at least in our experience, a persistent leukorrhoea means chronic infection of the cervical glands.

There is a class of cases in which we have been much interested, in which there is hardly any possibility of specific infection, gonorrhoeal infection. These cases have a history somewhat like this: They admit having leukorrhoea for a number of years, sometimes as far back in their life as they can remember, sometimes coming on about the time of puberty, sometimes following labor or abortion. This may be intermittent or persistent. They will admit to having occasional leukorrhoea during

these years, then they begin to have pain on menstruation. Then when they are examined, they are found to have a rather hard and sensitive uterus. Some of these women have borne children. In one hundred cases that we collected about a year ago, women who admitted having had leukorrhoea since around puberty or before, of those who had married 30% were sterile.

I admit to taking out a number of these uteri, and the pathologic reports have been extremely interesting. These were all cases in which there was not adnexal disease.

All of the 100 cases of which I speak were operated upon and subjected to pathologic examination. The uterus showed a very definite increase in fibrous tissue. Sometimes the uterus was completely fibrosed and in a number of cases a very small uterus had been converted into a hyalin ball. There was total absence of the muscle tissue of which the uterus is normally composed, and even the fibrous tissue had disappeared.

As far as we could tell, (several of these were in virgins) there had been no specific infection. A very interesting feature of cervical infections, I think, was brought up by Dr. Goodall, of Toronto, I believe. In quite a large series of cases, Dr. Goodall took extra postpuerperal care of the cervix. He used one of the popular antiseptics in 2% solution which was injected into the vagina very carefully immediately after labor and each day succeeding. He was pleased to find a satisfactory diminution in his mortality and morbidity. I think this immediate after care of the cervix is an extremely important thing. So far as we have been able to carry it out, our results run along parallel with Dr. Goodall's.

I am very delighted to be able to agree with Dr. Polak in regard to the use of the pessary. If the indications he has pointed out are closely followed, the results will be very satisfactory, I am sure.

Just one more point that impressed me, and that was the remark that Doctor Polak made in regard to the would-be gynecologist. Every now and then someone tries to combine gynecology with some other specialty. There is rather a natural combination between gynecology and obstetrics, although in my own opinion one of these specialties is sufficient for any ordinary mind. The problems in gynecology are different, I think, in many respects from those in other specialties. We have the anatomic problems, the physiologic problems, but in addition to that, getting a woman back on the job, making her a good wife and mother and head of her home has certain features that are social and economic, that few other problems in surgery have. I grant very freely that anybody can learn to take out a uterus or to remove a tube or to repair a cervix, but I also submit that that is the very small part of gynecologic practice.

The problems of gynecology are sufficient, in my opinion, for any one man. I have had 2 cases within the last month that show this very conclusively. A young woman was referred to me who was very desirous of having a child. Her history is that when she was seventeen, she was afflicted with a multiple arthritis which was in-

curable. She had an associated leukorrhoea of long standing. A general surgeon removed her cervix. That was all that was done. There was no attempt made to use any conservative method. Now she is married. She has made 3 attempts to carry a child, each of them ending disastrously at about the fifth month. The cervix has been removed flush with the vagina and, of course, it is extremely unlikely she will be able to have a family.

I don't believe a gynecologist would have taken off that young woman's cervix.

One other was a case in which radium was used for one of those strange menorrhagias of adolescence, the causes of which are so obscure. A small dose of radium was used at first, followed by a larger dose; both of these were unsuccessful. In the third attempt, a very large dose of radium was used. This was about 6 or 7 years ago. The result is that now the patient has the use of neither uterus nor ovaries. She has all of the disadvantages that any young woman would have without these organs. I think a gynecologist would not have handled this case in just that way.

I wish in closing to thank Dr. Polak for this wonderfully delightful paper he has read this afternoon, and I also wish to thank the Scientific Committee for permitting me to say a few words in connection with this paper.

Dr. Walker: I am sure we have all enjoyed hearing Dr. Pelak's scholarly paper this afternoon. I have been following Dr. Polak around for several years and he brings something new to us every time we hear him.

There is one point I would like to discuss this afternoon, that is in regard to infections of the cervix. Our method used at Post-Graduate is similar to what Dr. Polak has demonstrated here this afternoon, but I would like to give a little demonstration here. This represents the cervix imbedded deep in cellular connective tissue, these 2 parallel lines the broad ligaments, these the uteropelvic, and these 2 the uterosacral ligaments. It behooves all of us who are doing work in obstetrics to realize just how the infections of the cervix travel and what they really mean to the career as the economic asset of a woman. It has been my theory to follow all these patients after delivery. At the end of about 3 months when the uterus has involuted properly, if there is any erosion there we can demonstrate it by applying tincture of iodine; the squamous epithelium of the portio will take the stain of iodine whereas the cuboidal or columnar cells will not. That will differentiate between erosion and exstrophy.

In all these cases we know we have infection of the cervix and we use the cautery treatment. In other words, the gonococcus is killed at about 56° and the staphylococcus and streptococcus at 58° to 62°. It is seldom we cauterize the external lips of the cervix, because we feel the infection is down deep in the racemose glands and the principle is to get rid of the infection in those glands, and we think we can do it better by this method than by application of the linear cauterizations on the outside.

Recently one of the men over there devised a

method; he uses the cutting current, and says he gets less scarring of the cervix. I have cauterized a number of cases in private practice, 3 post-partum, and have had occasion to deliver those patients again and had no trouble and no dystocia at all.

Here is another point we found out. If these infections are not taken care of, you can get through the ring in the broad ligament and you get parametrial tenderness and even indurated uterosacral ligament with pain in intercourse, and so on, and a cystitis, which is something a lot of men do not recognize. Recently we have had occasion to follow a number of cases of recurring cystitis and the patients did not clear up until we got rid of the endocervicitis.

Dr. John O. Polak (Brooklyn, N. Y.): Dr. Walker's point is very well taken. I am sorry that I didn't make myself clear. We use a heavy nasal tip making linear stripes in the long axis of the canal beginning our cauterization just below the internal os and bringing it out on the ectropion. We used the Post cautery for a period of about 2 years and discarded it as it produced several atresias; these results were probably from not using it as it should be used.

I wish to say one word about diathermy. I wish to say to you that its use is another dangerous performance in the pelvis of women, except in the hands of those who thoroughly understand it and they are finding fewer and fewer indications. We have had several instances recently which have brought it home to us and I want to warn you that there are 3 dangerous procedures in gynecology which are being done today—cauterization of the cervix, diathermy, and insufflation. They all have a definite place; they have a clean-cut indication, but I warn you as to their possible dangers.

In regard to radium in these cases of dysmenorrhea the dose should be a very small one, 200 milligram hours being the maximum. These cases of endometrial hemorrhage which Dr. Lee spoke of, usually stop with the 200 or 250 hours of radium; if they do not you have to rupture the cyst that there is in the ovary, the lutein cyst which is keeping up the spotting.

My associates, Dr. Wolf, and Dr. Novak, of Baltimore, have very conclusively shown that the same changes are taking place in the ovary that are taking place in the endometrium in these endometrial hemorrhages at the two ends of life, and in all of these cases we can demonstrate a cyst, a lutein cyst in the ovary, and the rupture of the cyst checks the bleeding. Hoffmeyer brought this out years ago, in the bleeding in ectopics the bleeding would continue after the ovum was dead until the cyst was ruptured.

One other word I want to say in closing. (I didn't have time to speak of it) that is to call your attention to the fact that a large number of sterilities are due to low metabolic rates and are cured by thyroid, while another large class has been shown by work on animals, to be due to diet and can be cured by the use of vitamins. Recently there has been some excellent work done in the human on the effect of vitamins in sterility. I call your attention to it to show, as Dr. Lee said, that there is more to gynecology than there is in the taking out of a uterus or tube. It is the problem in each individual woman that confronts us that the gynecologist has to analyze.

INFLUENCE OF BLOOD CHEMISTRY STUDIES ON PRESENT TREAT- MENT OF PREGNANCY TOXEMIAS

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(This study is one of a series of investigations in the subject of pregnancy toxicoses being continued under the generous provisions of the John C. Oliver Memorial Research Foundation recently established at the Laboratory of the St. Margaret Memorial Hospital, Pittsburgh. The paper was read at the Annual Meeting of the Medical Society of New Jersey, held at Atlantic City, June 7, 1928.)

In order to crystalize the discussion of so broad and so general a subject as the toxemias of pregnancy it seems desirable to preface one's remarks with a brief consideration of 2 main points. The first of these is in respect to the current assumption that development of the toxicosis of pregnancy is dependent on a glycogen deficiency in the mother's body. The second matter for thought is the probability that all so-called pregnancy toxemias are closely related to each other and that hyperemesis or eclampsia, for example, are merely different manifestations of the same general disease.

The so-called "carbohydrate deficiency theory" of the cause of hyperemesis gravidarum, as originally expounded by both Duncan and Harding⁽¹⁾, of Toronto, and myself⁽²⁾ now seems to be found generally acceptable as the most probable explanation of the origin of these conditions. Briefly this is that an insufficient carbohydrate intake in the maternal diet plus the sudden and extraordinary demands of fetal and placental growth and uterine hypertrophy cause a glycogen deficiency in the body tissues especially noticeable in the liver during the early weeks of pregnancy, and that this deficiency initiates nausea and vomiting. Empirically this theory has already been amply justified, because the administration of frequent meals high in carbohydrates is all that is necessary to relieve mild nausea and vomiting of pregnancy within a few hours.

As a result of these observations followed

by a thorough clinical trial I was led to suggest in 1920⁽²⁾ that intravenous injections of hypertonic dextrose solution should be employed in the treatment of severe grades of pernicious vomiting of pregnancy. The favorable results of this treatment in a large series of cases have been published, not only from our clinic but from others as well, and this procedure is now in general use. At the present time we have nearly ready for publication a study which demonstrates that lowered blood sugar levels are predominately characteristic of hyperemesis gravidarum. In addition to this my co-workers and I have indicated in a recent publication⁽³⁾ that the convulsions of eclampsia may be considered and classed as hypoglycemic reactions. This latter work was the result of the logical reasoning that the theory of carbohydrate deficiency should apply to eclampsia as well as to hyperemesis, and also that eclamptic convulsions resemble those following the glycogen depletion of insulin overdosage or of experimental extirpation of the liver. We persisted in believing that hypoglycemia ought to be a feature of eclampsia in spite of the fact that many authorities have repeatedly asserted that hyperglycemia is absolutely characteristic of the disease. We argued that such increases in blood sugar, which they found so frequently and thought peculiar to eclampsia, were probably nothing more than the physiologic result of the muscular activity of the convulsions, and that if specimens could be obtained before the convulsions they might be expected to be low rather than high.

In order to prove or disprove this idea it was necessary to take long and tedious series of blood specimens in eclamptics because it is apparent that no one could foretell just when to anticipate a convulsion. How correct these ideas were, exceeded even our own expectations. We have been able to demonstrate in eclampsia that there is an extraordinary fluctuation in blood sugar in exceedingly short intervals of time. Differences of 50 to 80 mg. or more of sugar per 100 c.c. of blood were common occurrences in time intervals of only a few minutes (110 mg. change in 15 minutes in one instance). Moreover, the relationship

between these sudden drops in blood sugar and the occurrence of convulsions is so definite that the assertion may be ventured that eclamptic convulsions are preceded by, and are the result of sudden periods of relative hypoglycemia. By the term "relative hypoglycemia" is meant that it is possible for toxic symptoms of hypoglycemia to occur at any blood sugar level either above or below average, if this point represents the end of a sudden fall from a still higher blood sugar level. Such examples of sudden falls in blood sugar followed by convulsions are repeated occurrences in our eclampsia charts.

Moreover, innumerable facts about carbohydrate metabolism which are now being developed by research workers dove-tail in a confirmatory way with these findings. For example John⁽⁴⁾ has just reported 24 cases of toxic insulin reactions with normal or higher than normal blood sugar readings. In 5 of these diabetic patients the blood sugar was actually over 200 mg. per 100 c.c. when the reactions occurred. Remembering that they must have been higher when the insulin was given it is reasonable to say that they might be classed under our term "relative hypoglycemia".

MacLeod says that the occurrence of hypoglycemic toxemia may depend not so much on the actual level of the blood sugar at the time as upon the rapidity with which that level has been reached. On the other hand, a number of writers have reported instances of spontaneous or physiologic hypoglycemia with symptoms⁽⁵⁾. These have occurred physiologically in Marathon runners⁽⁶⁾, or spontaneously in nondiabetic persons in association with hunger and were invariably relieved by the taking of food. Cyclic vomiting in children for example has recently been shown to be a hypoglycemic reaction. Consequently it is apparent that overdosage with insulin is by no means the sole cause of this toxic phenomenon.

We believe that these recent blood chemistry studies and findings serve to accomplish several things at one time; the demonstration of a deficiency and disturbance in carbohydrate metabolism as being a common feature of both hyperemesis and eclampsia not only establishes

a relationship between these conditions but also formulates a reasonable scientific basis for what had been merely a plausible theory. Moreover, the success of the empiric administration of intravenous dextrose solution in both of these conditions is now explained by definite blood chemistry findings.

It is not unreasonable to assume that the characteristic differences between that toxicosis of early pregnancy called hyperemesis and that other of late pregnancy termed eclampsia are only minor ones and due to the differences in the immediate demands of the fetus and the rapidity of the onset of the symptoms.

Hyperemesis is essentially a slowly progressing process, while eclampsia is a relatively acute process. The blood sugar values in hyperemesis can sink to exceptionally low levels (27 mg. per 100 c.c. in 1 of my cases) without producing the usual toxic symptoms of hypoglycemia because this level has been attained so slowly. Exceptionally, however, a fulminating case of vomiting is seen in which the progression is so rapid that eclampsia-like convulsions do occur, deep jaundice is noticeable, death ensues very rapidly, and because it differs from what we are accustomed to see we term this condition not pernicious vomiting but acute yellow atrophy of the liver. This is a distinction based, I believe, solely on symptoms, and the final pathologic findings are identical. In other words, when the glycogen depletion progresses rapidly enough, convulsions occur even in a toxemia of early pregnancy.

In preëclampsia and eclampsia the process is always more rapid. A day or two of gorging on heavy protein foods late in pregnancy, especially if that has been the general trend of the patient's desires and appetite, may be sufficient to initiate the hypoglycemic levels which we have demonstrated; at these levels hypoglycemic increase in blood pressure begins and presently is followed by sudden nephritic changes. With continued glycogen depletion liver damage occurs, the system endeavors to recover from these low levels, more and more rapid fluctuations begin and the swing of the pendulum becomes wider and wider until convulsions supervene.

If this evidence of what seem to be the important underlying causes of pregnancy toxemias is conceded, it then becomes possible to generalize accurately regarding their treatment, and to do this not empirically but with a fairly clear idea as to the reason for each therapeutic measure.

The main principles of the treatment of hyperemesis gravidarum, acute yellow atrophy of the liver, chorea gravidarum, preëclampsia and eclampsia, are alike and depend upon a conservation of the remaining glycogen stores of the body, as well as restoration from their depleted state. The first is accomplished by inducing complete muscular rest and relaxation through the use of sedatives and opiates. Restoration of the glycogen stores is brought about by increasing the carbohydrate intake through intravenous injections of dextrose, and, when possible, the oral and rectal administration of carbohydrates.

TREATMENT OF HYPEREMESIS

The treatment of hyperemesis gravidarum may be specifically outlined as follows: For the mild cases, rigid instructions regarding a diet in carbohydrates, taken as small meals at frequent intervals (every 2½ hours). In addition, the patient should rest 1 to 2 hours each morning and afternoon. If specific instructions are given as to what and when to eat, the failure of such a regimen totally to relieve mild nausea and vomiting within a few days can almost invariably be traced to the patient's failure to follow instructions. Usually, she will say that she did not adhere to the diet because there was nothing on the list which she liked. The moderately severe and the severe grades of hyperemesis require complete isolation from their families under strict supervision, preferably in the hospital. The treatment should be initiated by a period of abstinence from nourishment or even water by mouth. During this time a blood sugar estimation is to be made and is almost certain to be low.

Intravenous injections of 25% dextrose solution (300 c.c. at a time) should be begun promptly and repeated 2 or 3 times daily if the patient's condition is at all serious. After

a few hours during which the stomach has been rested small amounts of liquid nourishment high in sugar content are administered at hourly intervals.

Even severe grades of pernicious vomiting with marked acidosis will almost invariably respond to this treatment within 12 to 24 hours, and the patient will begin to retain and assimilate increasing amounts of nourishment by mouth, whereupon the intravenous injections may be stopped. Total muscular relaxation and rest is induced by the administration of chloral and bromides by rectum.

Indeed, such prompt results may be expected from this treatment, that if definite improvement does not follow within a reasonably short time, it is probable that the organic damage from the toxemia is beyond repair and therapeutic abortion should be done without further delay. At the same time, however, the glucose injections must be vigorously continued for at least some days after the operation. Such a radical procedure as therapeutic abortion is steadily becoming less frequently necessary even for grave hyperemesis.

TREATMENT OF PREECLAMPSIA AND ECLAMPSIA

For preeclampsia the usual rational procedures (restriction of salt and of protein intake, rest, attention to bowels and kidneys) are to be vigorously utilized, and in view of the disturbance in carbohydrate metabolism now demonstrated increased carbohydrate intake should be immediately instituted. These patients ordinarily do not need intravenous injections of dextrose because they are able to take and retain food by mouth. A diet high in carbohydrates is essential for preeclampsia, therefore, and dextrose solution with fruit juices should be one of its features.

The so-called conservative treatment of eclampsia advocated by Stroganoff, by Tweedy of the Rotunda School, and by Williams, has by its lowered mortality rates demonstrated its value over the practice of undertaking active interference and immediate operative delivery of the fetus during eclampsia.

Having in mind the evidence which points to the disturbance in carbohydrate metabolism

as being the basis for empirically successful methods, I wish to outline the therapeutic procedures which now seem essential in the treatment of eclampsia.

(1) The administration of morphin by hypodermic injection, or of magnesium sulphate hypodermic or intravenous injection and of chloral hydrate by rectum. Each of these drugs is of value in eclampsia although they differ somewhat in their general effect. Their sedative action checks convulsions and by producing absolute muscular rest and relaxation the patient is afforded an opportunity to restore her metabolic equilibrium.

(2) The intravenous administration of hypertonic dextrose solution in single doses of 75 gm. in 300 c.c. of water (25% solution) at a rate of not more than 1 gm. (i.e., 3 c.c. of solution) per minute, or $1\frac{1}{2}$ to $1\frac{3}{4}$ hours for the entire injection. This should be repeated after intervals of 4 or 5 hours during the attack, and for a time following cessation of the convulsions (3 or 4 times in first 24 hours, according to the needs and response of the patient) until fluids can be taken freely by mouth.

The symptomatic treatment of the eclamptic convulsions having been accomplished by the sedatives, the use of dextrose is directed toward the underlying cause of the disease. It is antidotal to the hypoglycemia; it has a liver sparing effect, restoring glycogen depletion of the liver; and, it furnishes both dextrose and water to the other tissues.

The immediately noticeable effects of these injections are diuresis, lowering of blood pressure directly following the injections, cessation of the convulsions, and the prompt regaining of consciousness. The odor of acetone quickly disappears from the breath, and edema lessens rapidly after the injections.

Interference with pregnancy is to be undertaken only according to the present tenets of the "conservative" treatment. If labor supervenes the patient is to be delivered, preferably by forceps in second stage (nitrous-oxide and oxygen, or ether anesthesia) with as little disturbance to her as possible. If labor does not begin during the eclampsia, all attempts at operative interruption of the pregnancy are

interdicted until at least hours, and preferably days, have elapsed following cessation of the convulsions. In a certain percentage of instances pregnancy may be allowed to continue; in others the patient's condition makes it necessary eventually to interfere by induction of labor.

In a discussion of the treatment of pregnancy toxemias it is almost certain that 2 questions will arise. The first is in respect to the value of extract of corpus luteum in relief of pernicious vomiting. It is necessary to say of this that the results are so variable that it must still be classed as an uncertain and therefore unsatisfactory procedure. Secondly, the question will occur as to whether or not insulin shall be added to dextrose injections for these and related conditions as has been recommended. I have consistently opposed such addition of insulin to glucose for the relief of nondiabetic acidosis, since the woman's own ability to produce insulin is entirely unimpaired and merely in abeyance as nature's response to a lowered glycogen reserve. To inject dextrose is alone sufficient to stimulate her insulin production and to inject more insulin is merely adding over-doses of a dangerous extract.

Now that it appears that there is a disturbance in carbohydrate metabolism with hypoglycemia (the opposite of diabetes) in both hyperemesis and eclampsia it is obvious that this procedure is actually contradicted. Those cases in which benefit has been reported from the combination of glucose and insulin were possibly accelerated momentarily by the extra insulin, but the benefit was derived from the excess of dextrose (over "protection") rather than from any mysterious metabolic effect of the insulin. Dextrose alone would have been safer, while with the pancreas normal as it is, the injected insulin was unnecessary. Each succeeding dextrose injection stimulates the endogenous insulin production to further and further activity so that the addition of insulin to subsequent injections becomes increasingly dangerous. MacLeod and Campbell,⁽⁷⁾ of the Toronto group, also disapprove of the addition of insulin to dextrose in the treatment of

acidosis resulting from this and all other non-diabetic states.

In conclusion, may I urge that the common faults to be avoided in the use of dextrose by intravenous injection in toxicosis of pregnancy are the prevalent underdosage in weakened solutions, and its too rapid administration.

The therapeutic dose of dextrose for an adult should be a minimum of 50 to 75 gm. in 200 to 300 c.c. of distilled water respectively (25% solution), given by intravenous injection over a period of not less than 1½ to 1¾ hours and repeated after intervals of 4 to 5 hours according to the needs and response of the patient.

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DISCUSSION

Dr. Walker: I would like to ask Dr. Titus one question, i.e., if he has found an associated kidney infection in a number of these cases of hyperemesis, especially of the severe type?

Dr. A. W. Bingham (East Orange): From a practical standpoint, I would like to say that I have found the carbohydrate treatment very useful, in fact, I use it as a preventive for the hyperemesis cases; that is, I give all my pregnancy cases instruction to use the carbohydrate diet freely the first 3 months, cutting down on meat, eggs, milk, fruit, and so on. If they stick to the carbohydrate diet the first 3 months, I do not see nearly so many of the hyperemesis cases.

Dr. Nevin (Jersey City): I would like to ask Dr. Titus how to administer the continuous glucose solution in the manner he advised in the pres-

ence of these continuous convulsions, or frequent convulsions; just what is his technic to control that administration during rapidly recurring convulsions?

Dr. Cohn: I would like to ask Dr. Titus if it isn't a fact that there are some cases of vomiting of pregnancy due merely to mechanical displacement of the uterus.

Another question is how does the deficiency in glycogen produce the anuria, for instance?

The third question I want to ask is, what is the contraindication for a rapid delivery, for instance, in a case of eclampsia when there is no labor yet started, doing it by operative procedure, or doing rapid delivery by cesarean? What is added to the case? To my mind, it is rather detracting from the severity of the case by immediate termination of labor by the spinal anesthesia.

Dr. Paul Titus (Pittsburgh, Pa.): I agree thoroughly with the suggestion just made that the incidence of nausea and vomiting can be reduced in one's own practice by constantly directing patients during the early months of pregnancy to increase their carbohydrate intake. This seems to be confirmatory of what I have endeavored to present to you today, and in fact has been my own practice for some time.

The relation of focal infections to these toxemias has been investigated thoroughly by Talbott, of Worcester, Massachusetts, who believes that such infections are almost invariably the starting point for these conditions. Certainly a focal infection is quite likely to make a woman more susceptible to the occurrence of toxemia during her pregnancy but I do not believe it has more than a predisposing influence.

The question was asked as to how dextrose could be administered continuously by vein while a patient is having an eclamptic convulsion. Usually the convulsion interferes with the injection but it is a simple matter to stop the injection temporarily and then to proceed with it when the convulsive seizure is over.

"Reflex" vomiting as a result of displacement of the uterus has been discussed. I believe it was Whitridge Williams who first said that vomiting of pregnancy was of 3 types—reflex, neurotic and toxic. He has now abandoned the "reflex" classification and believes as do many others that the correction of a displacement or any similar procedure benefits the patient who is vomiting only in so far as it has a suggestive effect upon her.

In discussion of cesarean section whether under general, local or spinal anesthesia, it must be granted that there is a great difference of opinion as to the advisability of doing a cesarean at all for an eclamptic. I am strongly in favor of not attempting to deliver the eclamptic patient but rather of waiting until she is in better condition for an operation. During eclampsia a patient is a miserable surgical risk and we now know that eclamptic convulsions can usually be controlled very quickly and readily by appropriate treatment. By so doing the patient automatically becomes a far better surgical risk than when she is having convulsions. Many men think cesarean section is indicated immediately in eclampsia. On the contrary, I think better results are to be obtained by more conservatism; waiting at least until the patient is relieved of her eclamptic state, when it is time enough to begin to think about how she should be delivered. Moreover, this opinion is shared by many.

CESAREAN SECTION AND FORCEPS; When They Must Not Be Used

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(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 7, 1928)

Recent reports of surveys of obstetric operative mortality, especially that of cesarean section, from several representative communities, are appalling. These cities are certainly not inferior to those of our own state in their standards of surgical attainment. This consideration prompts a discussion which, though trite to many, our own observation and experience demonstrate to need repeated emphasis.

Labor is the extrusion of the mature conception product from the interior of the mother's body. In its simplest mechanical terms, it is the resultant of forces. These forces are the involuntary muscular contractions of the uterus, augmented by the partly voluntary contractions of the diaphragm and abdominal muscles; these tend to expel the fetus. They are opposed by forces constituted of the resistances represented by the shape and size of the presenting part of the fetus, in relation to the fixed or bony portion of the birth canal; by the elastic tension of the cervix; and by that of the muscular and fascial floor of the pelvis; they tend to retard the expulsion of the fetus. Successful outcome of the process depends on the preponderance of the first set of forces over the second within a period of time consistent with the healthful survival of both mother and baby.

Many factors influence this basic mechanism. The effective contractility of the uterus is modified by concurrent systemic disease of the mother; by general muscular asthenia; by defective innervation; by degenerative processes and new growths of the uterus; by overstretching of the uterus by abnormalities of its contents; by analgesic and anesthetic agents.

The effectiveness of the auxiliary action of the diaphragm and abdominal muscles is altered by nervous instability, lack of will

power, and hypersusceptibility to pain; by systemic disease; by analgesics and anesthetics.

The resistances also are influenced by numerous factors. The most frequent of these is alteration in the relation between the fetus and the bony portions of the birth canal. Such altered relation may depend on unusual size, shape, position, and consistency of the fetus; on the presence of other bodies within or without the uterus, complicating the relation; on abnormal size and shape of the bony canal depending on inherent or acquired causes. Such altered relationship may have reference to any portion of the birth canal, but is of greatest significance in relation to the superior strait, or inlet, of the pelvis.

The resistance of the cervix may be altered by congenital anomalies; by local disease or local manifestations of systemic disease; by tumors; and by the result of previous injury. That of the soft parts of the pelvic floor may be influenced by similar factors.

Whenever any of these causes result in destroying the essential preponderance of the expulsive forces over those opposing them, labor is arrested. Then fetal survival is menaced by circulatory disturbances and other effects of excessive pressure trauma, and maternal condition is endangered by exhaustion and sepsis.

To obviate these disasters, artificial intervention must be employed to augment the natural expulsive forces, or to diminish the resistances against them, or both. A variety of expedients is available to accomplish these ends. Among them are drugs to increase uterine activity, allay nervous inhibition, ameliorate pain, and diminish the tonic resistance of soft parts. Some of them are hazardous, others have narrowly limited indications, and all fail in a large proportion of cases to completely fill the need for artificial assistance. Where they do not, mechanical intervention must be resorted to.

Again the choice of expedients is fairly wide. Additional force may be applied to secure the expulsion of the fetus, by hand, as in breech extraction, or version; by the obstetric forceps; by other instruments, as the

blunt hook and cranioclast. Resistance by virtue of difficult relation between fetus and bony canal may be lessened by correction of disadvantageous position of the former; by enlargement of capacity of the bony passages by posture and by cutting operations on the pelvis; by diminution in the size of the fetus, as by craniotomy and cleidotomy.

The resistance of the cervix may be reduced by manual or instrumental dilatation and by cutting operations. That of the pelvic floor may similarly be minimized by stretching and cutting the tissues thereof. Finally, the effect of the resistances may be wholly obviated by the use of abdominal hysterotomy. The use of forceps, and cesarean section are the 2 methods in most frequent use, and the present discussion will thus be limited.

The application of all of these methods to individual cases of labor constitutes the art of obstetrics; art, rather than science, because so many of the values upon which choice of method depends are intangible; thus, mensuration of the bony pelvis cannot actually be made, though it can be approximated to a practical degree; fetometry, even by the employment of difficult special roentgenologic technic, cannot be even satisfactorily approximated; still less can the adaptability of the pelvic joints, or the moldability of the fetal head, be guessed at; therefore, only judgment based on experience and trained perception, and the test of labor in some cases, can solve the problem.

The frequency with which mechanical intervention is really necessary is probably best indicated by its frequency in public hospital services. In private practice, the closer personal relation of the accoucheur to his patient, his anxiety to impress her by a maximum alleviation of pain, the importunity of relatives, and the necessity for conserving his own time and strength, all tend to more frequent recourse to artificial aid. Statistics in regard to this incidence in both types of practice are extremely varied, and depend partly on racial and sociologic factors apart from purely mechanical considerations. Personal statistics will reflect these facts as well as an attempt to harmonize a variety of others. In one con-

secutive series of 1757 cases on our public hospital service, and in 1000 consecutive private cases, the proportion of spontaneous and mechanically aided termination was as follows:

	Public series		Private series	
	Cases	Pct.	Cases	Pct.
Spontaneous	1491	84.8	702	70.2
Cesarean	58	3.3	50	5.0
Forceps:				
Median	76	4.3	114	11.4
Low	76	4.3	68	6.8
Version	34	1.9	29	2.9
Breech extraction..	18	1.0	30	3.0
Craniotomy	7	0.4	7	0.7
Postoperative deaths:				
Maternal	6	0.34	1	0.10
Fetal	40	2.30	23	2.30

These figures would appear to indicate that a woman forming one of a carefully handled private series has a slightly better chance of survival, and her baby has a precisely equal one, as compared to a woman forming one of a public ward series, in spite of the much higher incidence of operative intervention in the private series. Yet, it is in this very tendency to more frequent intervention in private practice that danger lies to both mother and babe unless the indications and contraindications of each procedure are well understood and rigidly applied.

With reference to cesarean section, several fundamental considerations must be borne in mind. It is a laparotomy, and as such carries a definite mortality hazard for the mother, amounting under good circumstances to not less than 2, and perhaps as high as 4%. In poorly selected cases, this hazard runs tremendously high, giving some recently reported community statistics of over 30%. There is frequently morbidity, and always potential morbidity with reference to subsequent labors. Therefore, it is not, per se, an ideal procedure, and should not be selected wantonly. The conditions in which it is, or may be, a necessary or desirable choice, are too many to enumerate. The positive indications, such as extreme degrees of pelvic contracture, or complete occlusion of the birth canal by tumors, need no discussion. The most frequent of the indications where the operation is a question of judgment, are relative disproportion between fetus and passages, malpresentations and malpositions, placenta previa, abruptio

placentæ, eclampsia, and maternal heart disease. Rarely is one of these to be considered alone; the age, parity, obstetric history, social aspects, religious affiliation, and special present conditions, will all have to be taken into account in the individual case. The responsible attendant has the fullest opportunity and the greatest need for the exercise of his judgment. Occasionally, as in abruptio placentæ, the choice is wholly in the interest of the mother; frequently the interests of the mother and fetus coincide in the determination; but abdominal delivery is usually undertaken with preservation of the fetal life as the basic desideratum.

The essential conditions for maximum safety for the mother are good general condition; freedom from marked labor exhaustion; integrity of the amniotic sac; and uninjured and uninfected birth tract. Given these, in the presence of conditions which would seriously militate against fetal survival if vaginal delivery were permitted, and the choice of cesarean section will be unhesitating. Lacking these essentials in the mother, the life interest of the mother and that of the fetus may come into direct conflict, and their relative risks and relative rights must then be most seriously and carefully weighed. The extent to which the above conditions for maximum safety are lacking, influences greatly the immediate mortality risk of the operation, comprises the chief factors contraindicating it, and must be accorded full value in the decision.

The importance of good general condition of any patient in relation to surgical prognosis needs no discussion; however, the unfitness of these patients likewise to stand the stress of labor by the natural channels will lead in some cases to a discounting of this consideration, if other conditions strongly indicate the wisdom of section. To some extent, labor exhaustion will sometimes have to be similarly discounted.

Integrity of the amniotic sac should be considered so important that upon this question alone may hinge acceptance or rejection of section. As soon as the membranes are ruptured there is presented opportunity for migration of bacteria from the vagina to the

uterine cavity. Here, even though originally nonvirulent, they are capable of developing virulence if they invade a uteroperitoneal wound. Risk from this source increases rapidly with the time elapsed between the rupture and operation. If this interval be more than a few hours, even if other conditions are favorable, it should be held a definite contraindication.

The birth tract is potentially infected by every vaginal examination, and possibly to lesser degree by rectal examinations also. This potentiality increases with the number made, and with the total time during which they have been made. If, in addition, there has been any intravaginal or intra-uterine manipulation or instrumentation, with the contusion and laceration inevitably dependent on them, the infection has ceased to be merely potential and has become practically certain. In the presence of such certainty, abdominal delivery carries an altogether unwarrantable risk to the mother, and is contraindicated.

We do not believe that the type of abdominal operation considered alters these contraindications very markedly. We have only rarely used the modified Porro operation, and do not feel that it has place in the consideration of procedure where only the survival of the fetus is concerned. Nor do we feel that the place of the extraperitoneal section is a large one in this field, on account of its inherent difficulties, the risk of technical accident, and the seriousness of extension of infection to the parametrium. The cervical segment operation is much superior to the classical, or corporeal operation for many reasons, and we practice it almost entirely, but we do not believe that it is devoid of risk in the presence of even probable infection, and are not inclined to modify, in favor of any of these procedures, our conception of the contraindications to the classical operation.

Alternative vaginal delivery may more or less certainly prejudice the chance of fetal survival. Although it is of course repugnant to conduct the labor along lines which it is recognized will certainly or even probably result in fetal death, this may be preferable to selecting abdominal delivery with a high life

hazard for the mother. Such vaginal delivery, if competently managed, will very infrequently hazard the mother's life as poorly chosen cesarean often does; will not frequently destroy her child-bearing potentiality, as the Porro operation always does; and only very rarely *deliberately* and *inevitably* destroys the fetus. So that, while certain codes absolutely enjoin us against deliberate destruction of the fetus in the interest of the mother, application of the same doctrine would just as strongly enjoin us against deliberate destruction of the mother in the interest of the fetus. Moreover, it is to be remembered that the same factors which have served to make the mother a poor operative risk have just as importantly acted to diminish fetal vitality, and thus the inordinate risk to the mother from rashly chosen abdominal delivery may be incurred in the presumed interest of a fetus incapable of survival after all.

With reference also to the use of forceps, there are conditions which must be fulfilled lest the baby be injured or lost and the mother suffer death or serious permanent injury. The chief indications for forceps extraction are the lesser degrees of relative disproportion between the fetus and the factors of resistance to its passage through the birth canal. These result in failure of the maternal powers to accomplish their work; they are overcome and baffled by a task too great for them; or, failure of rotation or of extension of an excessively molded head results in arrest in midpelvis or on the pelvic floor. Malpositions increase the liability of such vicious relationship and the need for tractive augmentation of the natural forces. The most important conditions for the proper use of forceps are, first, that disproportion between presenting part and pelvic inlet be not too great. This means that the relation be such that with the exhibition of moderately efficient pains over a not inordinate length of time, there must have resulted such a degree of molding and descent of the presenting part that the latter is engaged; that is, that the plane of its maximum diameter shall nearly or quite coincide with the plane of the pelvic inlet. The application of forceps to a head

which is still wholly above the brim, or but slightly molded, is unjustifiable and murderous. Another most important condition imperative before forceps are applied, is full dilatation and retraction of the cervix. Here let me insist on rigid definition. The question—"How many finger-breadths dilatation is full dilatation?"—should not be answered in those terms. Whether or not any medical college actually teaches it, there would seem to be a tacit understanding on the part of many students, that a "4 finger" dilatation is "full" dilatation. The breadth of the 4 fingers at the distal interphalangeal joints is 7 cm.; the length of the least diameter of the normal fetal skull is 9.5 cm. The understanding of a "4 finger" dilatation, therefore, as "full" dilatation, or at least an adequate dilatation for the employment of forceps, is an essential misconception; if the error is increased by a faulty muscle sense, and the altogether too frequent tendency to estimate dilatation by the *bunched finger tips*, it becomes an error terribly menacing to the soft parts of the mother. Repeatedly, in consultation, one is asked to apply forceps with a cervical dilatation of which competent estimate of $2\frac{1}{2}$ to 3 finger breadths would be generous. Full dilatation must therefore be defined to mean that the cervix is opened enough to have retracted out of reach of the examining finger sweeping around the engaged head, except for a small portion of the anterior lip. If it is not, laceration up to and sometimes beyond the vaginal fornix, on one or both sides, with its grave immediate risk of hemorrhage and sepsis, and its subsequent morbidity, is almost inevitable.

The presentation and position must be determined with exactitude before forceps are used. The statement sometimes made that if one applies forceps, and they slip, one may be sure he is dealing with a posterior position of the occiput, is just as sensible as to say that if one throws in the clutch and the car crashes into the wall back of it, one may be sure his gears are in reverse! The briefest recollection of the manner and extent of alteration of the mechanism of labor caused by variations from the normal in presentation and position, and the effect thereof on the easily destructible

tissues lining and helping to form the birth canal, will emphasize the necessity for knowing precisely what we are dealing with before employing so powerful an instrument as the forceps. If misapplied, it becomes a veritable engine of destruction to mother and child alike.

But if the employment of cesarean section and of forceps is to be so rigidly restricted as to their conditions, what is to be done with those cases in which they are needed to terminate labor when these conditions do not obtain? The most important guard against this dilemma is prophylaxis, in the form of painstaking study of all cases before labor. This study should include careful pelvimetry; if there be doubt about the internal proportions of the pelvis, examination should be made under anesthesia. With full recognition of the difficulty and inexactitude of fetometry, some estimate of the size of the fetus should be attempted. Measurement of the total length of the fetus, and palpatory impression of its size, and the size of the head and its relation to the pelvic inlet, are informative. Presentation, position, number of fetuses and gross deformities such as hydrocephalus are determinable. Roentgenology is often an invaluable aid in confirming such findings.

These observations will enable the selection of those cases in which the anticipated difficulties certainly or almost certainly indicate section. Operation should be undertaken on them immediately on rupture of the membranes, or onset of labor, or very shortly thereafter. Vaginal examinations should be carefully abstained from, and rectal examinations be limited to 1 or 2.

In relatively few cases, however, will it be so certainly necessary to resort to section. The far greater proportion of cases, even of those which show some degree of pelvic contracture, are capable of spontaneous delivery, or at least of vaginal delivery with relatively slight mechanical assistance. These cases should be permitted a trial of labor, without forgetting, however, that they may require recourse to section. Therefore, the same safeguards of abstinence from vaginal examination, and unnecessary rectal examinations

should be accorded them as in the previous class of cases. If vaginal examination seems necessary to sufficiently accurately estimate conditions, it must be made not only under the strictest asepsis, but the external genitals, the vagina and cervix should be thoroughly antiseptized, using a 3 or 4% aqueous solution of mercurochrome in conscious patients, and the same strength acetone-alcohol solution of mercurochrome in anesthetized patients.

No didactic rules can be laid down for the safe duration of a test of labor, but the progress of labor, the general condition of the woman, and that of her baby as estimated by the quality of the fetal heart-tones, must be carefully watched. If, in the presence of vigorous rapid pains, there is, after several hours, no demonstrable advance in molding and engagement, cesarean section becomes the most conservative choice of procedure for both mother and babe. During this period of trial, if the mother shows signs of exhaustion, if the membranes rupture, if the fetal heart-tones show marked change, or if the uterus becomes so tonic as to cause rise of the contraction ring, operation should not be delayed, lest shortly later one finds conditions present which negate the employment of cesarean operation.

If molding and descent of the presenting part progress so satisfactorily as to insure the probability of successful vaginal delivery, labor should be allowed to proceed without interference. Here, time is the obstetrician's great ally. Not until the first stage is over is it permissible to turn, if necessary, to forceps. Even signs of fetal suffering must not cause defection from this fixed principle. The tedious suffering of the interim may be relieved by morphin, either alone, or in combination, as in the Gwathmey technic of analgesia. Full dilatation of the cervix having taken place, the presenting part having molded and partly descended, the progress of labor may be assisted by forceps if the pains are insufficient or the resistance too great to permit further satisfactory progress. In their application, it is still necessary to bear clearly in mind the mechanism of labor, and to ascertain

once more, with no shadow of doubt, the exact position of the presenting part. Even after proper handling of the case up to this point, failure to so clearly conceive these essentials pertaining to the case in hand may result in misapplication of the instruments and of the force they exert, which may damage or kill the baby. It has been sufficiently demonstrated that application of forceps to other than the lateral aspects of the head definitely increases the risk of tentorial tears and other intracranial injury.

In applying force, it is well to intermit the traction, as nature does in applying her own forces. It is worth while having an assistant actually time the periods of traction and rest; for instance 30 seconds of traction, 60 seconds of rest. A trial of this method will convince one, that without such actual timing, the periods of traction are apt to be longer than he realizes, and those of rest all too brief.

There must also be discussed the neglected cases which reach us after every principle which we have tried to define has been violated. They are frequently presented to the specialist, and may be encountered by any practitioner to whom a fellow practitioner or a midwife may look for counsel. Such a case as this is not apocryphal: A young primigravida is admitted after several hours of active labor, still in the first stage, in cephalic presentation, with the head only imperfectly engaged; she has had pituitrin administered early in her labor; the membranes have been ruptured since before her pains began; the vulva is unshaved and blood-soiled; she has had uncounted vaginal examinations; is exhausted and shocky; stupid with ether which has been administered over a long period; her vulva, perineum and vagina are contused and lacerated, as is her incompletely dilated cervix, by several unsuccessful attempts to deliver with forceps; her uterus is tightly clamped down on the fetal ovoid; the amniotic fluid issuing therefrom is discolored and fetid; her baby's heart is still beating, but its scalp is bruised and cut and the bones of the calvarium are indented by the forceps. Every consulting obstetrician can recall case after

case, of which, with infinite variety of detail, this is the prototype.

To section such a case is almost sure to murder the mother; Porro section will rob her of her potentiality of motherhood; further delay in delivering her increases the risk due to hemorrhage from her lacerated soft parts, and to sepsis; forceps extraction, except as very tentatively tried, may be a mechanical impossibility, and will increase the soft parts laceration and cause pressure endangering integrity of the bladder. However, in spite of all this, it may be well to rest the patient with a full dose of morphin, and to combat the shock, in the hope that, with a return of a measure of strength engagement will progress to a degree at which forceps will promise successful extraction of an unmutilated child.

But if the mother's condition be more urgent, or if the above program fails of success, then craniotomy must be resorted to, with the assurance that it is but hastening by a little the death to which the fetus is already doomed. The baptism of the fetus in utero is feasible, and must not be forgotten. Simultaneous shock treatment of the mother should be carried out. Repair of the lacerated soft parts must be restricted to that necessary to control hemorrhage, recognizing that drainage of the infected wounded areas is better if no attempt is made to close them. One's best effort in such a case but represents poor salvage of a wreck which might have been prevented.

To ask for prevention is not a plea for specialism. The pregnant woman who applies to any practitioner for obstetric care has a right to look to him for such intelligent prophylaxis as he might apply to the prevention of spread of infection in typhoid; for such elementary mechanical understanding as he must have to treat a Pott's fracture; for a carefully planned therapeutic program such as a case of diabetes demands; for the occasional benefit of competent consultation such as he would accord a case of acute mastoiditis; and finally, for a lively realization on his part that she is entrusting her life, her health, and the welfare of her unborn child to his hands. When this becomes so, maternal and neonatal

mortality will cease to be a reproach to medicine.

DISCUSSION

Dr. A. W. Bingham (East Orange): As a general rule, the time to intervene in a case of labor is when nature is unable to make further progress or when one or more organs cease to function properly on account of the added strain incident to pregnancy and labor.

When the presenting head is on the perineum and there is no advance, it is a simple procedure to assist with forceps but when progress is arrested or complications arise before this stage is reached the soundest judgment is required. When there is any doubt regarding the position and size of the fetus and its relation to the pelvis, an examination under anesthesia is advisable before deciding on any procedure. This, I believe, should be done oftener than is the custom in common practice. To apply forceps without knowing the exact position of the head will often be the cause of a difficult delivery with resulting still-birth. Such an examination may reveal a condition ruling out the use of forceps and making a version or section more desirable.

If everything is found normal but the cervix not dilated sufficiently, the administration of a sedative will generally give good results. There seems to be a difference of opinion as to just what is meant by a fully dilated cervix. Some practitioners call a cervix dilated when it is really only half dilated. These men have many difficult forceps cases, some of which result in still-births.

In regard to cesarean section, I agree with everything Dr. Cosgrove has said. Brilliant results are obtained by this operation but undoubtedly it is frequently performed on improperly selected cases, resulting in a high mortality.

There is very little to add to Dr. Cosgrove's comprehensive paper but I wish to emphasize these 3 points:

- (1) In case of doubt as to how to proceed, first examine the patient under an anesthetic.
- (2) Never apply forceps without being absolutely sure of the position of the head and full dilatation of the cervix.
- (3) To obtain the best results in cesarean section, great judgment must be used in the selection of cases.

Dr. Pcter P. Denton (Paterson): I wish to ask Dr. Cosgrove the present status of the use and abuse of pituitrin in these cases.

Dr. W. G. Schauffler (Princeton): Mr. President, I would like to ask Dr. Cosgrove what his reaction is to the plan that I hear of so often nowadays. After a cesarean the woman is encouraged to go ahead and have other children, with the prospect of a second or possibly a third cesarean.

Dr. Cohn: I have enjoyed immensely the doctor's emphasis on the indication and the contra-indication of the use of cesarean and forceps. The only thing I would like to know is how to drive this thing home to the average practitioner. I would like to ask Dr. Cosgrove about the use of version and the use of pubiotomy and the indications for those. He didn't mention them.

I would also like to ask him whether one would be justified in indiscriminately sterilizing the patient in every case of cesarean section.

Dr. Henry Cogan (Paterson): I enjoyed Dr. Cosgrove's paper. I happen to have been in charge of a maternity ward for the last 15 years, and it is surprising how very few cases we found where a cesarean section was needed. It is still more surprising how very few cases comparatively we had where forceps were indicated, so much so that my interns are always kicking that they don't get enough experience.

I had as my preceptor Dr. Philander A. Harris, and he taught me for 9 years as my superior, to wait and wait and wait some more. Here and there a dose of morphin and another dose of morphin and then interfere only when it is absolutely necessary. Our mortality in the ward service is nearly always due to cases that were experimented with on the outside where forceps were applied and slipped and the patient was torn through and through, then the patient moribund was sent into the ward. We don't get it in our own service. We don't examine them more than once vaginally; we examine them probably once rectally and then we wait. So long as the mother's pulse does not show any perceptible rise, so long as the fetus does not show that it is actually suffering, and we are not going to sacrifice the mother's life for the sake of the fetus, we prefer to wait.

Dr. S. A. Cosgrove (Jersey City): Thank you, gentlemen, for your very kind reception of what I have had to say.

The use of pituitrin should be discussed with the greatest caution. Pituitrin should never be used in the first stage of labor. In spite of Dr. Watson's scheme of the medical induction of labor, I don't like his inclusion of pituitrin there in minute doses even. Pituitrin should never be used in primipara, the danger to the pelvic floor is too great. Occasionally with a multipara, with a good obstetric history and not too rigid soft parts at the outlet and full dilatation of the cervix, with a tendency to inertia in the second stage, a tentative use of a small dose of pituitrin is permissible. Pituitrin in the main should be reserved for use after the end of the third stage.

Dr. Cohn: What do you mean by a small dose?

Dr. Cosgrove: Three to 5 minims. If you are going to get effect from moderate stimulation of the expulsive forces which you are looking for, a 5 minim dose will accomplish it. If it does not, then you have no right to depend further on the pituitrin to do so.

The use of the Kielland forceps—somebody has said that it is the man behind the forceps that counts more than the type of forceps. I have used the Kielland forceps. I don't feel that they fill any particular need that any of the ordinary types of forceps cannot be made to fill. I do not believe that they are so superior to any other type of forceps as their proponents claim them to be, and the introduction of the anterior blade by the Kielland technic certainly carries a special danger with it.

Dr. Schaffler asked about repeated section. Section is available for repeated delivery up to a certain limit. I have used it as many as 4 times in the same case myself and records run much higher than that. It is not necessary always to use cesarean after an initial section. Many cases are susceptible of being delivered by vagina after having had a section in a previous labor for some special cause which doesn't involve pelvic contracture for instance; but there is always a hazard

in subsequent labors due to rupture of the uterine scar. That hazard is less if the section has been of the low cervical type, than it is in the classical type.

I didn't touch on version because I specifically limited my paper to discussion of cesarean and forceps. We were not discussing the handling of impacted labor. I didn't quite get your question about cesarean and sterility.

Dr. Cohn: In an absolute indication for cesarean, would you be justified in sterilizing the woman?

Dr. Cosgrove: You might be justified. I personally always hesitate to do it at the time of first operation. I am much more willing to do it at a subsequent operation if they request it. That is a matter of individual conscience, it seems to me. No one can answer it for anybody else.

Dr. Cogan's emphasis on waiting and waiting and waiting simply emphasizes my statement that time is the obstetrician's best ally.

Voice: What do you do when you have ruptured membranes and labor ceases there and doesn't go on?

Dr. Cosgrove: Time and time and time.

INTERPRETATION OF VISUAL FIELDS

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Society of New Jersey, Atlantic City,
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While perimetry, *per se*, is incomplete, in conjunction with clinical signs and symptoms it becomes indispensable for localizing lesions in the visual system. I am of the opinion that this valuable means of diagnosis and prognosis is more or less neglected in the routine of our daily practice and have therefore prepared this paper with the hope of stimulating the profession to greater efforts in this direction.

A knowledge of the anatomic and physiologic conditions governing the course, distribution and function of the retina, enables us in many cases to determine with considerable precision, the situation of a focal lesion in the region of the optic conducting tract. To facilitate localization, the optic pathways are divided into the retina, optic nerve, optic chiasm, optic tract, primary visual ganglia, optic radiations and the visual centers in the cortex of the occipital lobes.

For practical purposes we need consider only 2 layers of the retina—the outer and inner layers. The outer layer—consists of rods and cones and the pigmentary epithelium. It is sometimes called the photochemical layer, and has to do with the chemical or electric changes which arouse light stimuli. The rods and cones are the visual sensory end-organs. This layer lies next to and is nourished by the vessels of the choroid. It is, therefore, easy to see how an inflammation of the choroid almost invariably involves not only the pigmentary epithelium but the rods and cones as well.

The inner, or ganglionic, layer with its conduction fibers, consists of ganglionic cells, whose fibers form the optic nerve and transmit light impulses to the primary visual centers. This inner layer is nourished by the central retinal artery.

It is only at the optic nerve head and at the ora serrata that the retina is firmly attached to the wall of the eyeball; elsewhere it lies loosely upon the pigmentary epithelium which adheres to the choroid, and separates from the rods and cones in retinal detachment. The fovea, macula, or yellow spot, occupies the center of the retina and is the most sensitive portion. According to Salzmann, it contains only cones, no rods. It is about 4 mm. wide by 3 mm. in height; the central depression, or foveola, is only 0.1 mm. in diameter. This portion of the retina is connected with the macular fibers of the optic nerve.

Let us now briefly consider the arrangement of the conducting fibers in the retina. In that portion of the retina which is on the nasal side of the optic disc, the nerve fibers are arranged fan-shape, spreading from the nerve head to the periphery (these are the crossed fibers). Those on the temporal side of the optic disc are arched or curved from the periphery to the disc, and are known as the uncrossed fibers. The fibers on both sides of the disc are apparently grouped in bundles, although no septa can be demonstrated.

The optic nerve is formed by the nerve fibers of the ganglionic cells of the retina, which are gathered together at the optic papilla to leave the eyeball as the optic nerve. It extends from the retina to the chiasm; is about

5 cm. in length, of which 3.5 cm. is within the orbit and 1.5 cm. lies in the optic foramen and skull. In the orbital cavity the nerve lies loosely in the areolar tissue but in the optic foramen, accompanied by the ophthalmic artery surrounded by its dural, arachnoidal, and pial coverings, it fits snugly into this bony canal, and here it is in close relation to the sphenoidal sinus; thus predisposing the nerve to retrobulbar neuritis when the sinus is diseased. The nerve leaves the posterior pole of the eyeball 15° to the inner side and a little above the macula. In the optic disc there are no end-organs for light perception; hence it is a blind spot.

We have already mentioned that about 1.5 cm. of the optic nerve lies within the skull. At this point the nerves unite to form the optic chiasm. The fibers coming from the temporal halves of the retinas do not cross at the chiasm but continue on their respective sides through the optic tract in the primary visual centers; while those coming from the nasal halves cross, to form the chiasm, and are continued through the opposite optic tract to the primary visual center. The immediate anatomic environment of the chiasm is quite as important as the chiasm itself. It is slightly above the groove of the sphenoid bone. Posterior to and beneath it is the sella turcica, in which rests the pituitary body. Directly in the posterior angle of the chiasm is the infundibulum or process which connects the pituitary body with the brain. Directly over the chiasm is the anterior tip of the third ventricle; and to either side are the internal carotid arteries. Here are many important structures which frequently become the seat of disease, and the optic commissure is usually involved. It is at the chiasm where we get interference from hypophyseal tumors. The optic tracts extend from the chiasm to the primary optic centers, which are the external or lateral geniculate body, the pulvinar of the optic thalamus and the superior corpus quadrigeminum or colliculus. They act as reinforcing and shunting stations for visual impulses and reflexes. Until recently these 3 primary visual centers were supposed to receive visual sensations, but the latest experi-

ments have proved that the external geniculate, alone, receives visual sensations. The eye reflexes are presided over only by the superior corpus quadrigeminum. The pulvinar of the optic thalamus probably registers pleasant and unpleasant light sensations.

Let us briefly trace the fibers that bring about the pupillary reflexes. The impulse caused by light stimulation is carried to the superior corpus quadrigeminum by the optic nerve and tract; from the corpus quadrigeminum, or colliculus, as it is sometimes called, fibers are sent to the nuclei of Edinger and Westphal of the third nerve, not only on the same side but also to the opposite side; fibers from these nuclei extend to the ciliary ganglia and fibers from these ganglia reach the pupil. Having traced the reflex arc, it is easy to see how consensual contraction of the pupil takes place. From the cells of the pulvinar and lateral geniculate body emerge fibers which form the optic radiations. They pass around the posterior horn of the lateral ventricle to the cortex of the calcarine fissure of the occipital lobe. This part of the cerebrum is the cortical center for vision. It is called the area striata or the calcarine area. Impulses from the lower and upper left quadrants of both retinas are registered in the corresponding lower and upper cortical visual areas, already alluded to.

The cortex of most occipital lobes have a secondary visual function, namely that of storing visual memories; especially is this true of the left occipital lobe in right handed people.

Having traced the visual pathways from the retina to the primary visual centers (the lateral geniculate, pulvinar and superior corpus quadrigeminum) through the optic radiations or the radiations of Gratiolet or Meyers tracts, as they are sometimes called, to the cortical centers, we can now more readily understand the clinical manifestations of the different lesions. The light rays cross in the lens, and each optic tract bears light impulses from the opposite halves of the visual fields; that is to say, if the temporal half of the right retina is blind, the nasal half of the visual field will be blotted out.

Lesions of optic nerve. A lesion involving

either entire optic nerve totally destroying the fibers, would cause blindness, or amaurosis, on the side of the lesion, as it would cut off both crossed and uncrossed fibers (tumors of nerve or sheath). Pupillary reflexes would be lost in the affected eye but not in the other eye, because as I have already mentioned a lesion between the corpus quadrigeminum and the retina would cut off the fibers to the Edinger-Westphal nuclei on the side of the lesion while the opposite side would still function. If only a portion of the optic fibers is destroyed, we have, instead of blindness, a scotoma, or narrowing of the field of vision, depending whether it be on the temporal or mesial side.

Lesions of chiasm. A lesion of the chiasm involving only the mesial portion would result in blotting out both temporal halves of the visual field and cause the condition known as bitemporal heteronymous hemianopsia. Heteronymous (which means opposite sides), because the right eye is blinded for the right half and the left eye for the left half of the field of vision; that is to say, in case of a tumor of the hypophysis, hydrocephalus of the third ventricle, dilatation of the infundibulum, or empyema of the sphenoidal sinus, pressure upon the decussating fibers from the nasal halves of the retina ensues.

Lesion of external portion of nerve. If, on the other hand, the external portions of the optic nerve at the chiasm are affected, the mesial portion remaining unaffected, we have a loss of function of both temporal halves of the retina, resulting in nasal heteronymous hemianopsia (rare condition); which may be brought about by aneurism of both carotids, symmetric gummatous foci at the base of the skull, also, perhaps, by cysts of the pituitary body bulging laterally.

Lesion of optic tracts. Lesions of the optic tract, the primary visual centers and the optic radiations, all cause homonymous lateral hemianopia for the halves of the field of vision opposite to the field of lesion; homonymous because both right or both left halves of the visual fields are involved. If the lesion is peripheral to the superior colliculus where the reflex fibers to the Edinger-Westphal pupillary nuclei are given off, there will be no pupillary

reaction of that side, because the oculomotor nucleus will be blocked. If, on the other hand, the lesion is central to this point, illumination of the insensitive halves of the retina does, on the contrary, cause contraction because the stimulus while unable to reach the cortical visual centers in the occipital lobe is not barred from reaching the superior colliculus which is the reflex center.

A unilateral lesion of the primary cortical visual center in the cuneus or lingual gyrus would give an homonymous lateral hemianopia with retained pupillary reaction. In this region, however, the upper quadrants in the retina register impulses in the upper portion of this area, causing the so-called quadrant hemianopia; that is to say, instead of the blind halves of the retina being on one side or the other, they are above or below, which is a material help in locating a lesion.

Eagleton says: "Hemianopsia is one of the most important localizing signs of temporosphenoidal lobe abscess. It is due to an involvement of the association fibers running from the cortical optical center in the cuneus to the geniculate bodies which pass through the temporosphenoidal lobe." Cushing has demonstrated that in temporosphenoidal lobe tumors the optic radiations are caught between the tumor and the distended ventricle.

The clinical difference between the homonymous hemianopsias occurring in a lesion peripheral to the primary visual ganglions, or central thereto, is that in the former the scotoma is a positive one, that is, it is recognized by the patient; while, if central it is almost always negative, that is, it can be mapped out on the screen but is not visible to the patient. Hemorrhage in the retina or vitreous, or disturbance of the choroidal circulation, prevent the formation of an image on the rod and cone neurons and induces a positive scotoma. On the other hand, a negative scotoma is associated with disease of the ganglionic elements of the axis cylinders.

Fields. The pathologic changes which one notes in examining the visual fields are of a two-fold character: First, scotomas or blind spots, as already described; and, second, changes in the size and shape of form and

color fields. A central scotoma is one which includes the macula, a condition which is common in retrobulbar neuritis or toxic amblyopia. Primary optic atrophy furnishes the best example of concentric contraction of form and color fields. The color fields are taken for white, blue, red and green, in the order named. The white represents the field for form; blue is involved in disturbance of the layer of rods and cones; while red and green are involved when the ganglionic layer is affected. Color changes are, in general, observed earlier than those for form. It is, therefore, essential to take the color fields. In diseases of the conducting paths and centers, blue and yellow may be preserved after red and green have been lost.

In hysteria or other functional conditions, the green field may extend beyond the limit of the red; thus, red and green reversal may be looked upon as functional in origin; reversal of blue and red, or blue and green, is organic in origin. Taken in conjunction with other symptoms, these are valuable signs.

Campimeter. My experience with the campimeter, or tangent screen, confirms what Duane said: "The campimeter, or tangent screen, cannot be used to detect the field of vision except when it is contracted. The advantages of the screen are accuracy. In this regard it is vastly superior to the ordinary perimeter for plotting scotomas. For mapping the double images in paralysis of the eye muscles, it excels any other method. For simplicity, thoroughness and rapidity."

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DISCUSSION

Dr. Z. L. Griesemer: Use of the perimeter in the interpretation of visual fields is probably one of the most important subjects that the ophthalmologist, neurologist and the cranial surgeon have to consider, and I am afraid we are all guilty of being pressed for time in a good many of our examinations and do not always take advantage of the opportunity which the perimeter affords us for making a diagnosis as well as watching the course and progress in various pathologic conditions.

The proper interpretation of fields presupposes first of all a technically correct field, and this requires time, patience and experience, for there are a great many factors that can easily enter into the course of the examination which could lead to erroneous results. A little time spent in explaining to patients the nature of the examinations and the results expected will go a great way toward insuring accuracy.

Dr. Wilson has presented the anatomy and physiology of the optic pathways in a manner which enables us to visualize them clearly. He spoke of only cones in the fovea, and in this connection there is one important point, and that is that each cone is in contact with a single axis-cylinder whereas eccentric to the muscular region there may be numerous cones in contact with a single axis-cylinder which accounts for the acuity of vision in this area and likewise can also account for the comparatively large defect which may result from a rather small lesion.

He spoke of the nerve being in relationship with the sphenoidal sinus; it is also with the posterior ethmoidal cells, and in case of abnormal development of the frontal you may have it go back to the apex of the foramen. Likewise each portion of the nerve is in apposition with the frontal lobes. They are also the seat of tumors and abscesses which bring about fairly definite defects.

I think perhaps the most important point from the anatomic standpoint is the arrangement of the retinal fibers, as pointed out. This arrangement of the retinal fibers is maintained throughout the nerve and possibly up to the cortical centers, and lesions in the pathway are reflected inversely in the field.

Aside from the anatomic consideration much can be learned in interpreting the visual fields if we consider it from a pathologic standpoint as well, because different parts of the pathway may be especially affected by different forms of disease. We must think of a lesion in the pathway first of all as a focus surrounded by an area in which the nutrition is impaired. This focus is represented in the field by a defect which may be absolute, surrounded by a zone in which the defect may be only relative or indistinct.

The taking of frequent fields is very important and in connection with that certain deductions can be drawn. First of all, that sudden changes as to rapidity of involvement, alteration in shape, indicate activity. More stationary changes indicate

chronicity. And in this connection it is also pointed out that a disproportion between the fields of form and the fields of vision indicates activity whereas a more proportionate change between the two suggests chronicity. These points are also of value, of course, in interpreting.

Roughly speaking, the lesions in the pathway produce their results in several ways. First of all you have the toxic and inflammatory reactions; changes due to pressure, changes due to vascular disease, and also changes due to trauma. The various parts of the pathway are affected with processes that may be more or less peculiar to that particular portion of the pathway. The papilla and the optic nerve are particularly susceptible to the toxic and inflammatory changes. Pressure effects are noted more commonly in the nerve-head, as in glaucoma, and also at the chiasm, as in pituitary involvement. There is also involvement of the tract from encroachment upon it by temporal lobe tumors. The vascular changes are noted more frequently in the posterior portion of the pathway and also in the most anterior portion of the retina.

Aside from the anatomic consideration and the pathologic consideration in the interpretation of fields, to which Dr. Wilson alluded, there are functional types in which we have assumed that there is no organic basis for those changes, as in hysteria, where we have spiral and tubular fields. You see that an interpretation of the field takes for granted the properly taken field. It is dependent upon anatomic, pathologic and a psychologic factors.

The paper dealt almost exclusively with the localization of lesions in the visual pathway and inasmuch as the paper was rather aimed at stimulating interest in the subject of perimetry, I might allude to other instances in which perimetry is of value to us. In glaucoma sometimes it is the only means we have of discontinuing the medical treatment and instituting a surgical procedure. It is of especial value in noting the progress in sinusitis and also will be an aid in determining whether to institute operative interference. In sympathetic ophthalmia some knowledge can be gained from a study of the normal blind-spot, and here too observations made lead us to remove the exciting eye. I think it might also be of value in the treatment of cerebrospinal lues. Fields taken here might aid in determining whether to discontinue arsenical treatment.

Dr. Eagleton called our attention to the value of the perimeter in cases of fractured skulls. We must not depend upon perimetry alone in the interpretation of a field to make a diagnosis. We have to correlate it with the remainder of the clinical data at hand and then draw our conclusions or make our diagnosis.

Dr. Norton L. Wilson (Elizabeth): I have nothing to add, Mr. Chairman, except possibly to emphasize the reflex arc. Perhaps one of the reasons why I was induced to prepare this paper was that I heard an ophthalmologist say this: "You see, there is a reflex to the pupil and therefore the man is not blind". That, I think, set me thinking about this and induced me to prepare this paper. We now know that the corpora quadrigemina are the bodies which are the reflex bodies, and it is easy to see, as I pointed out on the screen this morning, how a patient might be blind in one eye and yet you would get the reflex in the other eye because of the crossed fibers through the Westphal-Edinger nuclei, and I think that ought to always

be kept in mind. Of course, if the lesion is above the corpus quadrigemina, you will still get a reflex in the other eye. If it is below, you will also get a reflex. All the hemianopsias below that portion are homonymous all the way down to the cortex.

RETINAL DISEASE WITH MASSIVE EXUDATION; Report of Case

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(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 8, 1928)

This rare and unusually interesting disease of the retina, described and classified by Coats in 1908, occurs in young people, most commonly of the male sex. The condition is characterized by presence in the fundus of large masses of white or yellow exudate; usually there are also groups of cholesterol crystals and hemorrhage. Wide variations are exhibited by this disease, so that Coats arranged the cases in 3 groups. In Group 1 were placed those cases without gross vascular change; in Group 2, those with gross vascular change; and in Group 3 those with arteriovenous communications. Coats regarded this third group as distinctive, and later placed such cases with the angiomas described by Von Hippel. No hard and fast rules can be followed in classifying these cases of massive exudation of the retina, as there are many modifications with probably varying etiology and pathology.

Coats first collected 33 cases and added 10 cases in his papers of 1908 and 1911. Since then, much has been written concerning this disease. DeSchweinitz, Zentmayer, Friedenwald, Jarvey, Leber, Davis, Clausen, Cords, Dodd, and numbers of others have added to the literature, making a total of 101 cases reported, among which 7 or 8 cases are doubtful. Cases classified as angiomatosis with arteriovenous communications and vascular tumor formation have not been included, nor have

those cases of exudative retinitis beyond age of 40 years reported by Von Hippel and Axenfeld, with ages of 49 and 70 years respectively, as they were looked on as being of a senile degenerative nature, and yet related.

CASE REPORT

J. K., boy aged 6½ years, was brought to Wills Eye Hospital, Feb. 9, 1927, because his father noticed that he could not see with right eye. Condition was first detected about a year previously; the exact date could not be recalled. There was no history of trauma to the eyes, nor had there been any inflammation or pain in the eyes. There was no history of prolonged labor nor of instrumental delivery at time of birth. Two younger brothers were healthy and normal. Two of mother's sisters died of tuberculosis, and father's brother was treated for a chest affection at Mt. Alto. Parents living in good health and with no abnormalities, except that father has a bluish-red nevus about the size of palm of his hand on left cheek. There was no history of smallpox, diphtheria or whooping cough. Had bilaterally enlarged cervical glands when 3 years of age, at which time tonsillectomy was resorted to, with improvement in gland condition. Tonsil stumps were removed at second operation in March, 1927. Small cervical glands were palpable. Physical examination of chest and body negative. Apparently in good health and only slightly under average weight. X-ray examination of chest, on April 12, at Children's Hospital, is reported as follows: "Well-marked hilum thickening, with finely mottled infiltrations present throughout. May be due to T. B." A second x-ray examination of chest and sinuses on November 11, by Dr. Farrell, of Jefferson Hospital, showed: "Distinct cloudiness of the right maxillary antrum and of the anterior ethmoid cells on this side. These structures on the opposite side seem quite air-bearing. The density is not that of exudate, but rather that of thickened mucous membrane. It is undoubtedly inflammatory in origin. The frontal and sphenoidal sinuses are not developed. There is evidence of infectious change involving the lungs, but the degree of change is not very

great, and there is nothing characteristic in its outline, except at the right hilum where there were some indurated and calcified nodes which, in all probability, are of tuberculous origin. The heart seems a little larger than the average and there is some fulness in the region of the left auricle; a change which is often associated with valvular disease."

Wassermann and Von Pirquet reactions were negative. Urine had specific gravity of 1.030 and very faint trace of albumen. No sugar. Blood examination: 4,650,000 erythrocytes; 10,150 leukocytes; hemoglobin 80%; coagulation time 8 minutes.

At time of admission in February, vision in right eye was fingers at 2 feet. Left eye 20/20—2. Tension of each eye normal by palpation. External examination of eyes was negative. No evidences of inflammation or injury.

Ophthalmoscopic examination of right eye showed the vitreous filled with dust-like opacities. The nerve head was indistinct, margins not seen. On the nasal and temporal sides of what appeared to be the nerve head was an immense, opaque, dense, yellowish-white prominent mass extending toward the macular region and encircling it in a broad band ($1\frac{1}{2}$ d.d.) over which the retinal vessels passed. The mass extended forward nasally and temporally beyond the view with the ophthalmoscope. Directly in the macula was an irregular, triangular yellowish-white area (size $\frac{1}{2}$ d.d.) with a border of black pigment. Immediately about this was a zone of red fundus. The surface of the mass was elevated, had a mottled, cumulus cloud appearance in places; and again at others had a more uniform greenish or yellowish-white appearance. The margins did not end abruptly, but merged into the surrounding retina by small patches and dots some of which seemed to coalesce. Areas of patches were seen in different parts of red fundus, mostly along the large vessels. The blood-vessels were full and slightly tortuous. No hemorrhages were visible.

Left eye was negative throughout.

Another record of fundus examination was made in April, 2 months after admission, with

the following changes. The yellowish-white mass previously noted above the macular region became a zone or arc of dots and small patches encircling the macular region similar to a circinate retinitis. Below macular region and elsewhere, the mass persisted the same as at time of first examination. Blood-vessels larger, more tortuous and extensive. No hemorrhages visible.

During the summer the boy had measles and was not seen again until the first week in October.

Examination of right eye 8 months after admission showed the following changes: Pupil was 4 mm. and did not react. Iris was of slightly lighter color than in left eye. Anterior chamber normal. Vision of right eye equaled light perception only in small area in lower temporal field. Vision of left eye 20/20—2. Tension both eyes was 18 mm. Hg. by Schiötz tonometer. Ophthalmoscopic examination showed the dust-like vitreous opacities more dense and numerous, increasing the haziness of fundus; disc margins were not seen. The opaque, dense white mass was larger, definitely elevated 3 or 4 diopters, and extended along course of and in regions supplied by the large vessels of retina. The mass extended peripherally beyond view with the ophthalmoscope. The area in macula seemed unchanged. In the lower nasal quadrant was a region of detached retina, presenting a gray, undulating and wrinkled appearance with numerous blood-vessels passing up and down over the irregular surface and at places disappearing from view. The detachment extended from far periphery close to the disc, and within 2 disc diameters of the macula. The blood-vessels, both arteries and veins, were greatly enlarged and tortuous, and much more extensive. Far in the temporal periphery were fusiform dilatations along the course of the veins, and on the smaller vessels were small round balloon-like dilatations of varying size from the diameter of a vessel of the first magnitude, to 2 or 3 times this size. At places, also, were fine capillary coils and petechial hemorrhages. Below a branch of the superior temporal vein, far in tempora

periphery, was an area of hemorrhage, half a disc diameter in size.

The following changes were noted 9 months after admission: The detachment had become so large that the disc was not visible over top of the detached retina. The vessel changes were more marked; the coils of small vessels more marked; the dilatations on the terminal branches of the superior temporal vein were larger and more numerous. The white mass had extended farther in upper periphery, and had disappeared beneath the superior temporal vessels adjacent to disc for a distance of $2\frac{1}{2}$ disc diameters.

On December 5, about 10 months following admission, the detachment had become extensive in all quadrants. For the first time, the eye became painful and the tension of the globe was distinctly elevated; 4 days of treatment with miotics to relieve the tension was without effect. Tension increased and the globe became stony hard. Considerable congestion was noted, cornea hazy, pupil semi-dilated and the pain so excruciating as to disturb sleep. Enucleation was resorted to, because of uncontrollable, painful secondary glaucoma.

The pathologic examination and report by Dr. DeLong, Wills Eye Hospital pathologist, follows:

Macroscopically. The globe was fixed in equal parts of Muller's solution and formaldehyde, and prepared in the usual manner. The eye was divided horizontally. This revealed a normal anterior chamber, the retina being detached and V-shaped; the detachment being caused by a serous exudate which occupied the greater part of the vitreous chamber. The retina itself seemed to be markedly thickened. The chorioid and other structures of the globe appeared normal.

Microscopically. The cornea, iris, ciliary body and lens normal. The anterior chamber partially filled with a serous exudate. The iris angle obliterated by an anterior synechia, producing a secondary glaucoma. The retina is markedly disorganized and in certain areas there are new-formed fibrous tissue masses in different stages of organization. These are scattered throughout the retina, particularly peripherally. The new-formed fibrous tissue is located chiefly in the nuclear layers, but there are also many small areas found in the nerve fiber layer.

The neuroglial supporting tissue is proliferated and, particularly in the area near the disc, it forms rather thick strands in places. The ganglionic cells and the nuclear layers are fairly abundant, though much scattered. In the neuroglial trabeculi fibrous masses are also present. Scattered in this disorganized retina are many swollen cells which are probably leukocytes. Some of them

show moderate evidences of degeneration. In certain areas the cell nuclei stain distinctly and in others they are shrunken and crenated. In the peripheral portion of the retina there are many vascular changes. Some of the larger vessels, especially the veins, are enormously dilated. In certain places there are as many as 6 such vessels, lying close together. In other places they are isolated. Their walls show some round celled infiltration. There are some vessels, particularly the smaller arteries, which show marked disease changes, the walls being very thick, and having a more or less homogenous appearance. In many of the vessels the lumen is eccentrically placed and narrowed, and almost entirely obliterated. In certain areas these vessels are so numerous that many of them must be new-formed. Some of the vessels show distinctly that they have sac-like projections, which are probably aneurismal dilatations. In other areas, about the exudate and extending through the outer portion of the retina, there are little vascular tufts.

On each side there is a detachment of the retina. The space is filled by a serous exudate, in which are numerous swollen cells. The nuclei are fairly well preserved. These cells contain very little pigment but some of them contain brown granules. They are the so-called "ghost cells" so frequently found in retinal exudates. There are also many cholesterol spaces in the exudate. The chorioid shows very little change except that to the temporal side there is a small area where we have infiltration and some thickening. Here the pigment epithelium is broken through; otherwise it is intact. The optic nerve is healthy.

The interesting feature of this case is the constantly changing distribution of the white mass. For weeks after the patient was first seen the size and distribution of the mass changed very little. Two months after first observation the solid band above macular region became a patchy, spotted zone similar to circinate retinitis, only to assume again the solid band distribution as the white patches coalesced. No areas of hemorrhage were detected previously in the regions where new white masses appeared. Hemorrhage was not visible until within the past few months, in the form of small petechial hemorrhage, when the marked vascular changes took place, and after the detachment of the retina.

There has been definite progress of the disease during the 10 months it has been under observation, and it is with deep regret that the course could not be observed during the previous year when vision was first affected. The case is placed in the group with vascular changes described by Coats, and also in a separate form, with miliary aneurysms, described by Leber in 1912.

Varying conditions have been assigned as

causes of this disease. Coats excludes tuberculosis and syphilis; he also excludes the hypothesis of "some quiet inflammatory process due to the metastasis of some little virulent organism in the capillaries of the outer reticular layer". His chief objection to this hypothesis is, the slight amount of destruction to the structure of the retina in view of the large extent of the inflammatory material. The best explanation, according to Coats, is that "they are due to the slow organization of hemorrhage". As to the cause of the hemorrhage, it is not the same in every instance, the possibilities being hemorrhage during birth, strain as in whooping cough, constitutional conditions, primary vascular disease, or alterations in the coagulability of the blood. He explains the fact that the mass itself never resembles a hemorrhage, by supposing the retina becomes immediately edematous, thickened and filled with crowds of swollen leukocytes which hide all details. The cases examined pathologically, by Coats and others, show fibrous tissue formation between retina and chorioid in close connection with the retina, and with less intimate adhesion to the chorioid.

De Schweinitz and Holloway, in 1911, described 2 cases in male students 19 and 20 years of age, with whitish exudate similar to circinate retinitis and with aneurysmal dilations and punctate hemorrhages. Both had positive Von Pirquet and the physical signs of incipient pulmonary tuberculosis. Leber, in 1912, collected 11 cases in the literature and reported 2 cases of his own; 1, a man, aged 25 years, showed suspicious apical catarrh in one lung; as to the other, a man 20 years of age, the question of tuberculosis was not gone into. Reviewing these cases, Leber admits the possibility of some connection between the condition and a tuberculous infection, but is doubtful about it. The last case, in a series of 5 reported by Friedenwald in 1914, showed miliary aneurysms; age of patient here was 17 years and no cause for the condition was found.

Black (1918) reports 1 case, a young man 23 years of age, with positive tuberculin reaction. Atland's (1923) patient, 22 years of age, showed positive reaction of T. B. Dodd, in 1923, reported a case improved with tuberculin injections. Davis (1921) reports 2 cases; in 1, the patient being 10 years of age, with vascular changes, showed marked reaction to tuberculin tests, and with tuberculin injections noted improvement. Crigler's patient (1920), aged 14, showed aneurysmal dilations. Tuberculin reaction negative.

Clausen thinks transition forms exist between circinate retinitis and exudative retinitis. He believes the same process may cause both, possibly a chronic infection with an embolic cause of the retinal changes. He also thinks some cases of angiomas possibly belong to exudative retinitis. Brundt, in discussion, emphasized the true tumor formation of angiomas and its familial character oftentimes.

The majority of cases recorded in the literature have been reported without association or relationship to disease process elsewhere in the patient or history of the patient. Some have been thought to be associated with the exanthems or with trauma during birth. A number of cases cited above were associated with tuberculosis, which seems to be present more frequently than any other disease. In addition, improvement under tuberculin treatment was reported by a few observers.

The case herewith reported first exhibited characteristics of Coats' Group 1 cases and then took a form somewhat similar to circinate retinitis. A number of months later definite vascular changes were visible, placing it in Coats' Group 2. Marked increase in the vascular changes during the last 2 months suggested the possibility of arteriovenous communication and vascular tumor formation in future development, approaching the type of the angiomas. This case shows 2 associated pathologic processes. First, the suspicious tuberculous chest condition with a distinct family history of tuberculosis; and sec-

ond, an indefinite sinus lesion. There is no proof of connection of either process with the eye condition. Apparently, they are merely associated and occur coincidentally. It seems important to have thorough x-ray and clinical examinations made in all instances, so as to note the frequency of associated pathologic processes.

DISCUSSION

Dr. E. Blair Sutphen (Morristown): The doctor said the blood clotting time in one case was 8 minutes. Isn't that a little above the limit for normal? He didn't give the time in any of the other cases and I wonder what the blood clotting time was in those. It does seem to me that might be interesting to know.

Dr. Linn Emerson (Orange): There is, of course, the possibility of a blood dyscrasia in connection with these cases. The massive exudate that you see later in the cases of intractable ocular hemorrhage, that have repeated hemorrhage, that go on from bad to worse, perhaps might be put in that category. Of course, this case was under observation over a long period of time but I had one man who went to half a dozen different consultants in New York and he had been blind at one time; then the hemorrhage would clear up and he would have considerable vision, and then the record would show organized white exudate, and he would go along for a while and he slowly went from bad to worse. I believe he is totally blind now. I know that 15 or 20 different men in New York saw him; he had all sorts of systemic treatment and treatment to improve the coagulability of his blood, but we couldn't find any underlying cause at all.

Dr. Willard G. Mengel (Closing discussion): The possibility of hemorrhagic diathesis has been gone into very carefully. In this case, the coagulation time is high, but not beyond the upper limit of normal variation. Occasionally, tonsillectomy is done with the blood coagulation from 11 to 12 minutes, and no abnormal amount of hemorrhage during or after the operation. Investigations to determine whether there had been frequent nose bleeding or hemorrhages elsewhere, and whether there was a history of hemorrhage in the family, were made, but nothing positive of that sort could be detected. Special attention was paid to the literature in connection with prolongation of the clotting time, but no abnormalities were discovered.

At this time, I should like to emphasize the fact that this case is striking in the blood-vessel changes—aneurysms and dilatations.

At the last A. M. A. meeting in Washington, you may have heard Dr. Cushing's discussion on the angiomatoses, and recall that he had a number of cases of brain conditions with angiomatosis of the cerebellum associated with angiomatosis of the eye.

Apparently there are other lines of investigation that we might go into, but it appears to me that the predominating factor in connection with those cases in the literature, was a tuberculosis. We can say definitely that they were associated with it, but as an etiologic factor, no direct proof exists.

ACIDIFIED MILK IN INFANT FEEDING

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(Read at the Annual Meeting of the Medical Society of New Jersey, Atlantic City, June 7, 1928)

Sour milk has been used by various peoples for a long time but its medical history begins in 1770 when Campert, of Holland, wrote of its use in the form of buttermilk. It became of interest in this country in 1919 when Marriott, of St. Louis, described his preparation of lactic acid milk. Finklestein had produced his protein milk as a particular food in certain types of intestinal disease, and not for general feeding purposes. Undoubtedly, much of its value is due to the acidity, and it should therefore be considered as a special type of acid milk.

The theory for the use of acid milk is based on the difference in buffer action between human milk and cow's milk. By buffer action we mean the acid binding property which is found in the phosphorus and calcium compounds. These combinations are not chemically stable. They will bind, up to the point of saturation, any free acid ions with which they come in contact, thereby making inert that amount of acid. This normally happens to the hydrochloric acid in the stomach until all the buffer substances are neutralized; then, if there is no excess of acid, there is no opportunity for enzyme action to occur and, consequently, little gastric digestion. It takes approximately 3 times as much hydrochloric acid added to cow's milk as to human milk to buffer or saturate these compounds. This sounds elementary, but I have found a great deal of confusion on this point. On it is based the whole theory of acidifying milk. Hydrochloric acid cannot be secreted in sufficient amount to buffer the milk, and still leave enough free acid for all the enzymes to complete their work.

Marriott states: "As the action of hydrochloric acid in the process of digestion is

largely if not entirely due to the number of free hydrogen ions present, the determination of the number of free hydrogen ions, or the hydrogen ion concentration, is of more significance than the determination of the total gastric acidity by titration methods." The hydrogen ion concentration is expressed by the logarythm system. The maximum gastric digestion in normal breast fed infants is reached at the end of 1½ hours and is maintained for 1 hour. It is expressed as pH3.75, or 3.75 millionths grams of free hydrogen per liter. The influence of various milk mixtures on digestion can be judged from this as a standard.

The importance of hydrogen ion acidity is as follows: Rennin begins to coagulate casein at a gastric acidity of pH6.3—the beginning of digestion—producing a peptone-like body and a soluble paracasein which combines with calcium to produce calcium caseinate which is insoluble and precipitates. With a lesser degree of acidity the passage of unchanged casein through the pylorus is favored. Schloss and Anderson observed the passage of unchanged casein through the intestinal wall in athreptic infants, which would suggest that the denaturation of protein by rennin may be of importance in preventing this absorption. Between an acidity of pH6 and pH4 the gastric lipase splits up 20% of the fat into fatty acids and glycerol. These fatty acids combine with calcium to form soaps. Pepsin begins to act at an acidity of pH4, an acidity which is not reached with cow's milk unless previously acidified. These, in brief, are the gastric digestive processes which occur best with breast milk or with some other method of feeding which allows the hydrochloric acid to obtain its maximum benefit.

Several methods can be used to reduce the buffer action of milk:

(1) Cow's milk diluted 1:3 approximates human milk in its buffer action. The disadvantage of this is that on a milk diet larger volumes of fluid than are physiologically indicated, must be used, and calories must be supplied with a neutral substance which has no buffer action, such as carbohydrates in the form of sugar or starch. There are distinct

limits to this method. (2) Drying milk reduces the buffer by changing a portion of the calcium into tribasic calcium phosphate. This is probably one reason why dried milk preparations give good results in so many cases, but this method also has its limits. (3) Theoretically hydrochloric acid would be the acid of choice for modification. Other acids which can be used are the organic acids such as lactic, citric, and acetic. The essential difference between hydrochloric and the organic acids is that hydrochloric acid is not oxidized and must be excreted as an acid radical. Whether this is harmful to the acid-base regulating mechanism, whether it is a strain on the kidneys as recent investigations of Bartlett would indicate, or whether it is the ideal acid particularly in tetany where the formation of calcium chloride is valuable, are questions which have not much clinical significance. Faber has certainly had good results from its use, and my own limited experience has been satisfactory.

Irrespective of the type of acid used the effects of all these acids when used properly are much the same.

(1) There is a precipitation of fine flocculent curds similar to the curd of mother's milk. This is a mechanical aid to digestion.

(2) A reduction of the buffer action to approximately that of mother's milk. Infants with digestive disturbances, marasmus, and acute infections have an actual concentration of hydrogen ions in the gastric contents of about 1/10 that of the normal infant on the same food. The importance of assisting the digestion in these cases is apparent. The proper chemical reaction of the chyme cannot be over emphasized.

(3) The growth of pathogenic bacteria is prevented. Experiments with lactic acid milk show that complete inhibition or death of colon, typhoid, and dysentery bacilli takes place at an acidity of pH4. Some investigators believe that invasion of the duodenum by members of the colon group is a contributory factor in the production of diarrhea and the nutritional disturbances of infancy. Clinically, I am convinced that I see less summer diarrhea among the normal infants fed an acid milk,

and that when it does occur it is much less severe.

(4) We can give a maximum food value with a minimum bulk. This is especially important in athrepsia where a high calorie diet is essential. Calories can be increased to 80 or 100 per pound of body weight by the addition of a nonfermenting carbohydrate in an acid medium. This means a rebuilding of tissue in a much shorter time than by other methods. I have personally found it superior to the flour malt soup preparations.

(5) An increased fat digestion; 20% of fat can be split by gastric lipase into fatty acids and glycerol. By combining with calcium while still in the stomach, soaps are formed. This is of clinical value in irritations of the upper bowel, peristalsis is retarded, and a greater absorption of food and fluids permitted.

Of the various acids which can be used the most popular one is the lactic acid formula of Marriott: Boil and cool 16 oz. milk and remove the scum. Add to this milk, placed in a deep glass or china bowl, 4 c.c. U.S.P. lactic acid of 75% strength, adding the acid drop by drop and stirring with a glass stirring rod, about 6 circular movements for each drop of acid added. Then add to this 1 oz. dark Karo syrup and 3 oz. boiled water. Mixing the acid and Karo together first and then adding this to the milk saves time and gives as fine a curd. This can be fed to most infants without further modification, the quantity being varied according to age and caloric requirements. In fat disturbances, skimmed milk can be used. In sugar intolerance, the mixture can be sweetened with saccharin; or milk sugar instead of dextrimaltose preparations where indicated. The formula can be thickened with flour or cereal gruels especially in cases of pylorospasm. It can be, and ought to be, modified to meet individual cases. I'd like to emphasize that point. We should not think of acid milk only in the formula as described by Marriott. It can be modified as other milk preparations; you can change the sugar, leave out the fat, if necessary, thicken it with gruel, farina, cream of wheat, and so forth, as we do in cases of pyloro-

spasm. We get all the advantages of the other modifications, plus the advantage of acidification.

Faber advocates hydrochloric acid because it is the physiologic acid. Hydrochloric milk is made by adding 1/5 of 1/10 normal HCl to 4/5 milk. This acid is not oxidized and increases the acidity of the urine, with sometimes excoriation of the buttocks as a result.

Lemon juice milk, as advocated by Hess, has the advantage of its antiscorbutic properties and does not curdle. It is made by adding 21 c.c. lemon juice to 24 oz. milk plus 12 oz. water and 1/2 oz. cane sugar. Hess also adds the yolk of an egg to this mixture. I have been using this combination recently in poorly nourished infants with excellent results. In the last few months I have been using it very extensively. I am very favorably impressed with lemon juice milk.

Vinegar milk or acetic acid milk, as described by Dunham, is giving the same satisfactory results.

From the foregoing analysis one might think that acid milk is the best substitute we have for mother's milk. We must not forget that infant digestion is very adaptable to various foods, provided that the education to a food is begun gradually and with care. We have all been surprised to see what certain infants can digest at an early age. I believe that we obtain just as good results with a simple sweet milk mixture in the normal case as with an acidified milk. However, the normal infant digests the acid milk so easily, the formula is so easy to work with, and the changes rather in quantity than in quality, that the popularity of the method is well deserved. Full strength acid milk can be given to a normal infant at any age. They take it without objection until up to 8 or 9 months, when sometimes, because of the taste, they refuse it. Some infants will prefer it to sweet milk, and I have had some use it up to 14 and 15 months. Infants who do not gain on sweet milk, and yet have no apparent digestive disturbance will often begin to gain when the milk is acidified.

The greatest use for acid milk is in the treatment of diarrhea due to sugar indigestion

or intolerance, with watery acid stools and excoriation of the buttocks. This includes the majority of summer diarrheas in infants under 1 year of age. Fermentation of the carbohydrates results in an acid reaction in the intestine, the fatty acids are not neutralized, and are excreted as such, instead of soaps; there is a marked loss of food, fluid and mineral salts, an excessive excretion of mucus, with a resultant loss of tissue turgor. These cases need therapeutically a sterile, easily absorbed high protein diet which is not irritating, and which will delay peristalsis, so that there will not be such a tremendous loss of fluid. The food should be alkaline in the intestine so as to counteract further acid fermentation.

When the condition is severe the best food is the protein milk of Finklestein. In milder cases an acidified milk, made at first with skimmed milk, without the addition of sugar, or very little, can be started early. What we wish to avoid is the early starvation with nothing but water for 1 or 2 days, and then the long building up from a very weak diet. So many of these cases make a little progress and then relapse. If these infants are started from the beginning with either protein or a weak acid milk they do not have to go for a period of time without food, and frequently do not lose any weight at all. After a few days the food can be increased quite rapidly, even before the stools have returned to normal. This may seem quite radical but Finklestein proved it with protein milk, and it will also obtain with an acidified milk, especially if fat free.

Young and premature infants who are not able to have breast milk do well on acid milks. This brings up the question—how early in life can such a milk be used? It can be started at birth. When breast milk is not obtainable my routine is to start premature infants on protein milk and full term infants on acid milk. The results are very satisfactory. We start with a weak formula and increase according to the tolerance. I stated Marriott's formula above. That should be modified according to the individual case. If you know the child can't digest full strength fat no matter how modified, leave it out or dilute it, but

use your acid milk and modify it according to the case. I have almost entirely given up dried sweet milk, lime water, and gruel mixtures in these cases.

As an extra food for the nursing infant acid milk agrees well, and in these cases it can usually be started at full strength. The dried acid milk preparations are convenient for this purpose, as the quantity can be made as required.

CONCLUSIONS

Saturating the buffer substances of cow's milk with acid allows the hydrochloric acid and the gastric enzymes to exert their maximum effect.

The growth of pathogenic bacteria is inhibited during the process of digestion as far as the upper intestinal tract. This probably has an important action in preventing intestinal infections.

Acidified milk can be given concentrated with a high percentage of carbohydrates. It is of great value in conditions requiring a high caloric intake.

It can be used as long as desired in place of sweet milk by the normal infant. The rate of growth and tissue turgor resembles that of the breast-fed infant.

It is an excellent substitute for breast milk for the premature and young infant.

It is our best method of treatment in diarrhea due to sugar fermentation, and in the intestinal disturbances common in summer. It cures these cases rapidly, without the loss in weight and strength, and tendency to relapse, so characteristic of these conditions.

DISCUSSION

Dr. Arthur Stern (Elizabeth): Mr. Chairman, the paper by Dr. Krauss is both timely and interesting—timely on account of the beginning of the summer months, and interesting on account of the clear interpretation of the physiologic chemistry of acid milks in the stomach of the baby. Long before Metchnikoff called attention to the action of sour milk, and the use of sour milk especially in the Balkan States, the Dutch physicians, of whom Dr. Krauss mentioned especially Campert, wrote on the treatment of dystrophic children with buttermilk. I suppose they were almost in those days demoralized in the hot summer time as they had no food for dystrophic children. They reported, especially if they enriched the buttermilk with cane sugar and flour, a larger percentage of

dystrophic children got along better than before.

It is very interesting to read in Finklestein's book that he has met old physicians who used buttermilk if they wanted to get any results whatever. It is very interesting, too, that Jacobi, in his memoirs, cites that when physicians used to meet during the hot summer and spoke about the use of milk in children, they came to the conclusion that they would rather give anything else but milk in summer time to children. It was left to the talent of Dr. Marriott to devise a staple product of making the milk acid through chemical method instead of bacterial growth.

Uniform results were, I suppose, reported immediately and many physicians have added this milk to their treasure of foods. Yet there are a few points I would like to mention which make this feeding sometimes very difficult and make it a great obstacle to the physician. First, lack of intelligence on the part of the mother; and second, lack of confidence in the physician, because from time immemorial mothers have thought that diarrhea was caused by having a bottle of milk turn sour. Another great obstacle is that many children, notwithstanding the excellence of the food, will not take lactic acid milk because it does not taste good. Babies are individualizing, too, like other human beings. What is sauce for the goose here is not always sauce for the gander. So children will only take it at certain times. After a while they will refuse it and so you have to come finally to another food. But, altogether, the milk can be used almost everywhere, where we need a food which will prevent to a certain extent the dystrophic conditions in children.

It has been recommended, too, as a food for premature children. At random I took a chart from my series in the hospital. We fed this milk to a child of 2 lb. 15 oz. I will show you this chart. It has not made a very good gain in the 5 days with us. We had to give it something else. Some physicians report excellent results in these cases, others had to give it up. We gave it the ordinary formula of Marriott, 1 oz. every 1½ or 2 hours, about 10 oz. altogether. It did not take it all. The child was a premature child of the eighth month, came in from the outside. We didn't know very much about it.

There is still another point in which I cannot share the enthusiasm of Dr. Krauss, using this milk in children suffering from diarrhea. I have had several cases where we used it for quite some time and finally had to come to the protein milk of Finklestein.

Dr. Miller: I did not hear Dr. Krauss' paper; I came in too late. I am not personally in favor of the routine use of acid milk. It seems to me its greatest use is in special cases. We must not forget the acidity of an infant's stomach varies anywhere from 2 to 4 pH.; maybe higher. When we give it a milk, such as lemon juice milk, which is about 4, and lactic acid milk, which is about 5, we are sometimes adding too much acid to the baby's stomach and I think there is a danger often of gastric hyperacidity. I have seen cases where it has been brought on by the use of acid milk. I feel the same way about using it in very young and premature infants as Dr. Stern does. I find its greatest usefulness in cases not doing very well on other methods of feeding. Particularly babies of 3 or 4 months; if you put such on acid milk they often do very well.

However, just as many do as well on a favorite method of mine, that is, the thick farina mixtures.

I think, in using milk formulas, we have to study the particular baby. It might be a good idea if one could find out what the acidity of the stomach was before beginning acid milk.

Dr. F. C. Johnson (New Brunswick): I think in St. Louis now the general consensus of opinion has changed somewhat in regard to the acid used in milk mixtures, and I personally use a good deal less lactic acid in making up the formulas. Lately, I think, Marriott reported that in 25 oz. whole milk one dram by measure of lactic acid is usually sufficient for most infants. The amount of acid necessary is not quite so much as originally used. This forms a little better curd, isn't as heavy, doesn't look so bad to the mother, and babies apparently do just as well with it.

Another acid which Dr. Krauss did not mention is orange juice as a substitute for lemon juice or lactic acid; 2 oz. orange juice in a quart of milk for rather older infants than the new-born. It does very nicely, tastes good, makes a good drink even for sick children of older ages, and young babies do very well with it. The results have been almost uniformly good. It is only an occasional youngster who doesn't do well on it.

Dr. Julius Levy (Newark): I should like to have Dr. Krauss tell us just how he determines how much lactic acid milk to give. I think differences in results depend on how you use it just as with other formulas. I must admit I am a great enthusiast for lactic acid milk. I think it can be used almost universally for premature babies, immature babies, or dystrophic infants and the normal baby.

The point that Dr. Stern made about some babies refusing it applies particularly, I think, to older infants. You can't start older infants on lactic acid milk, but all the younger ones you can. My own guide is, usually 2 oz. milk to 1 lb. of body weight. To a 2 lb. baby, I would not be giving much more than 4 or 5 oz. in 24 hours. If it is getting 1 oz. about every hour or so, as Dr. Stern indicated in his feeding of a premature, the ill results should not be ascribed to the lactic acid, but to the excessive amount of milk.

I was interested in Dr. Johnson's statement about Marriott cutting down on lactic acid. I have made a rule for some time of not giving more than 4 c.c. in the entire formula and recently I have been keeping rather below the 1 c.c. to 4 oz. milk. I find they get along better. Some babies in the beginning will vomit when you start them on lactic acid milk. I imagine some mothers would immediately take that as an indication that the baby can not take it. My experience has been that if you ignore that vomiting for a few days, the baby takes the lactic acid milk. It will vomit the first feeding and rather profusely, or maybe 2 or 3 times. I have been using concentrated lactic acid milk in practically all infants except where we want a larger bulk. Then I only add water to make up total quantity. I don't add it as a diluent, only to make sufficient quantity.

Dr. Krauss said he thought they got along as well as breast-fed babies. I have been put in rather the peculiar position of beginning to feel they get along better. It is something I hate to admit because we have been rather intense breast feeding propagandists, but the babies develop a much stronger musculature, the tissues are firmer, they gain more rapidly; and it is not fat but really bone, muscle and blood. In regard to premature babies, I have seen any number of them gain 1

to 2 oz. a day. I am no longer surprised to see a baby on lactic acid milk gain 1 lb. a week. So, I think it is a very fine feeding method.

In regard to bacteria, we did a little work at the State Laboratory and we found that it not only inhibited colon bacilli but it had a marked effect on pathogenic bacteria, to such a degree that we were considering whether there may not some day develop a method of protecting commercial milk through adding lactic acid. The law insists that there shall not be more than a certain degree of acidity in commercial milk, but from this experience it would appear in the summer we could permit the introduction of a certain amount of lactic acid to prohibit excessive growth of bacteria.

Dr. Krauss: I am very much interested in this discussion. Dr. Stern brought up the question of lack of confidence. That is one reason why in the last few months I have been experimenting with lemon juice milk and, strange to say, I have found a great many mothers are perfectly willing to add lemon juice where they will hold up their hands if you mention adding orange juice. They have always been taught orange juice should not be added. Lemon juice apparently has never entered their heads. You can put it across very well. We do have that lack of confidence to contend with. It does obtain, particularly with the younger men advising these things to a new parent, and it is a very important psychologic factor which we cannot get away from.

The refusal to take it, I think, can be usually gotten around by waiting 24 hr., letting the child go without food, if necessary, or by sweetening the food with saccharin. Premature infants, of course, are always difficult to feed when around 2 lb. in weight. In those cases I use protein milk. I don't believe in using the full strength lactic acid for them. If they refuse we feed them by lavage.

Dr. Miller brought up the danger of hyperacidity. It has been proved that organic acids are entirely oxidized. Lactic acid, acetic acid and so forth are thoroughly oxidized without disturbing metabolism. I brought out that there is a little question about hydrochloric acid milk because hydrochloric acid is an acid which is not oxidized. However, the possibility of any disturbance in the acid-base balance has not been proved one way or the other. The question of less acid: I gave you Dr. Marriott's original formula. He is now using 1½ dram, I believe, to 1 qt. milk with apparently as good results.

One important factor in measuring the acid is that it must be measured accurately. Teaspoons vary in size and the ordinary medicine glasses will vary a great deal. I insist on having an accurate measuring glass, pharmacologically tested, for accuracy. I have in my pharmacist stock some particular glasses and each is tested. Some of the glasses are marked "one dram", and actually measure a dram and a half.

The reason orange juice does not work so well from a scientific standpoint is because the amount of citric acid in orange juice varies more than in lemon juice. There is absolutely no reason why orange juice should not be added. I am educating all my mothers to add it at any time instead of an hour before feedings as usually taught.

Whether we get better results with dried acid milk than the acid milk prepared at home has puzzled me also. I think a great deal depends on the way it is made. These dried milks also have a little less fat in them than the ordinary milk. The ordinary dairy milk has 4 and very often 4½%.

The dried milks run to 3 and 3½% fat, which may have something to do with their ease of digestion.

Some children cannot take sugar, especially Karo, on account of the small amount of granulated sugar in it. If they can't take Karo, try milk sugar. If I find they have a sugar intolerance, I thicken the milk with some flour mixture to bring up the calories.

The amount of lactic acid milk, Dr. Levy, I figure standard lactic acid milk with the usual amount of Karo runs 28 to 30 calories per ounce, and in the normal cases I figure 2 oz. per pound of body weight. In the individual case, for instance in a diarrhea case, where I know the child is ill and can't digest that strength, I may use skimmed lactic acid milk or cut down in the beginning on the amount of carbohydrate.

In comparison with breast milk feeding, Dr. Levy brought out a very interesting point. In spite of all our propaganda for breast milk feeding, we know a great number of women who are too nervous and unstable to nurse their babies satisfactorily, and their milk varies from day to day depending on conditions at home. Before they leave the hospital they get along very nicely, but as soon as they come home they get nervous, upset, and go to pieces. The placid cow certainly doesn't go to pieces, and the results with artificial feeding are very good.

THE ESSENTIALS IN THE DIFFERENTIAL DIAGNOSIS OF HEART MURMURS IN CHILDREN

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The modern busy physician cries aloud in his medical wilderness of old and new books and staggering mountains of medical journals, for someone to condense and simplify the essentials in the various subjects, so that "he who runs may read". This paper is designed to render a little aid in the A, B, C's of differentiating heart murmurs in children, by presenting what seem to us the basically essential points in such diagnosis, (omitting all secondary signs) noted during the past 8 years as an instructor in heart disease in children in the medical school, and in charge of a Cardiac Clinic of between 300 and 400 children in the New York Post-Graduate Hospital.

Thousands of children in this country are

condemned to lives of partial or complete invalidism because of a functional heart murmur being mistaken for an organic one; or a child with an acquired heart disease being needlessly restricted, when his heart lesion is in a quiescent state, and no heart failure is present. The salvage of these children, with their depressed mental outlook, and their conversion into happy, useful, active children, represents one of the most important divisions of the cardiac field today.

When we hear a heart murmur in a child, what should we do? Two things: First, adopt a negative attitude as to its being an organic lesion until we are very sure of our diagnosis. Remember that, to the public, a verdict of organic heart murmur means invalidism, terror and ultimate death. Second, determine to what group the murmur we are listening to belongs. What are the main groups to consider? They are:

1. Congenital heart murmurs.
2. "So-called" functional murmurs. (Abnormal signs and symptoms.)
3. Acquired heart murmurs in: (a) Acute septic endocarditis; (b) sub-acute bacterial endocarditis; (c) rheumatic endocarditis; (d) luetic heart disease; (5) thyrocardiac disease; (f) heart disease associated with hypertension and arteriosclerosis.

For the practical purpose of this paper we can discard groups D, E, and F as occurring so rarely in children as to warrant their exclusion.

CONGENITAL HEART MURMURS

What are the important findings that would lead us to place a murmur in Group 1, or congenital heart murmurs?

- (1) Cyanosis. From 70 to 90% of congenital heart cases show this to some degree—often accompanied with club fingers.
- (2) Loud and long murmurs. As a group, congenital murmurs are much louder than acquired or functional heart murmurs and are also longer, many of them extending into both systole and diastole.
- (3) Persistent murmur, discovered in the first 2 years of life. Very few acquired heart

murmurs are found in the first 2 years of life. Most of these are associated with septic processes. A few are rheumatic.

(4) Loud murmurs with maximum audibility at base of the heart to the left of the sternum or along the sternum down to the xiphoid cartilage. Many of these are accompanied by a diffuse thrill.

(5) A bulging chest deformity in the precordial region with a marked delay in growth, accompanying the preceding symptoms.

Having placed a murmur in the congenital group, what is the importance of further differential diagnosis of the various congenital lesions? From the practical standpoint very little, as the important thing is the degree of cyanosis present; the greater the cyanosis, the poorer the prognosis as to the probable length of life. Little can be done for these cases except to avoid overstrain (after determining the ability of a heart to perform) and to prevent infections. From the scientific standpoint an accurate and complete differential diagnosis is very difficult, as the great majority of congenital lesions are multiple defects. While a complete study of these is not possible within the limits of this paper, we might mention that the largest number of congenital murmurs fall into 3 groups: (a) Pulmonic stenosis—the commonest congenital lesion. A loud rough systolic murmur, heard best in the second left interspace near the sternum, plus a systolic thrill felt best at this same area. (b) Septal lesions. Prolonged, systolic, often harsh and loud—heard best over sternum, particularly the lower two-thirds. (c) Patent ductus arteriosus. Prolonged, whirring "humming top" murmur, usually heard in both systole and diastole and varying in volume at different phases of the cardiac cycle.

The older a child the less likelihood of a murmur being a congenital one, as probably less than 10% live to be 21 years of age.

FUNCTIONAL HEART MURMURS

This large, much used, and convenient waste-basket for heart murmurs might better be called the "nonpathologic" heart murmur, the anatomic cause of which we do not know.

What are the suggestive points that would lead us to place a murmur in this group?

(1) Diagnosis by exclusion of congenital and acquired heart murmurs. Any murmur that cannot positively be placed in the congenital or acquired groups, should be put, at least temporarily, in this class. This is a proper practice, as it is commonly accepted that there are more nonpathologic heart murmurs than there are acquired and congenital cases.

(2) These murmurs are often soft and short.

(3) Murmurs which may be inconstant and variable.

(4) Systolic murmurs heard most commonly in the pulmonary area, or "area of romance". Some are heard at the apex.

The simplest way to classify these murmurs individually is to place each in one of the following groups, depending on what we believe to be the underlying cause of the murmur: (1) Cardiopulmonary murmurs; (2) atonic murmurs in asthenia and fevers; (3) hemic murmurs; (4) "venous hum" murmurs at the base; (5) accidental murmurs.

When we place a heart murmur in this non-pathologic group, we should listen to that heart every 2 months for 1 year, but allow no restriction of the child's activities. This will suffice to prove or disprove the accuracy of the first diagnosis, and also keep the case out of reach of some misguided "murmur" enthusiast who would, immediately on hearing the murmur, give the child digitalis and invalidate it to some degree. If the mother is neuropathic, the child should return to the clinic at 3 month intervals indefinitely, to prevent this very common calamity occurring.

ACQUIRED HEART MURMURS

As the object of this paper is to sift out from among the numerous signs and symptoms of heart murmurs those that are absolutely fundamental to differential diagnosis, all secondary signs are purposely omitted as being not within the scope of this study. What are the suggestive points that would lead us to place a murmur in the acquired group in children?

(1) A rheumatic history. Evidence of some phase of rheumatic infection, such as rheumatic fever, chorea, repeated attacks of acute follicular tonsillitis, rheumatic subcutaneous nodules, so-called growing pains, (when orthopedic defects are excluded as a cause) or rheumatic skin-lesions, is obtainable in the majority of acquired heart murmurs. In the smaller bacterial endocarditis group other infections are found.

(2) Cardiac enlargement. Most acquired heart lesions develop cardiac enlargement after they have been present an appreciable length of time.

(3) Murmurs with definite characteristics. Nearly all acquired heart murmurs can be divided into the large group of rheumatic etiology and the small group of bacterial type.

There is nothing in the characteristics of a murmur that help us to place it in the bacterial endocarditis group. This is done by blood cultures on cases with suspicious symptoms. When we find a persistent hemolytic streptococcus in the blood, associated with a rapid septic course of fever, conjunctival petechia, severe and often purulent arthritis, and emboli, it usually means an acute or malignant bacterial endocarditis.

If we find a persistent or occasionally positive culture of *Streptococcus viridans*, associated with a long course of symptoms; mild at first; periods of moderate or slight temperature; an enlarged spleen; pallor, or anemia, or a "café-au-lait" color; emboli; slight hemorrhages; and emaciation; we are usually dealing with a subacute bacterial endocarditis. Sometimes, in the latter, no positive blood culture is ever found. Occasionally other bacilli than those mentioned are the cause.

For the practical purposes of this paper the pulmonic murmurs will be omitted, as belonging almost entirely to the already considered congenital group.

TRICUSPID INSUFFICIENCY

This condition never exists alone, being a systolic blow, heard over or near the lower sternum; associated with a pulsating liver;

usually present with other murmurs as a relative one, being part of a general cardiac dilation; occasionally as an actual valvular disease in advanced rheumatic involvement of the endocardium.

The common and most important acquired heart murmurs are those of mitral and aortic disease. Some of the essential points in the diagnosis of these 4 commonest murmurs, selected from a group originally compiled by a committee of the New York Heart Association, are here presented, together with a schematic chart picturing their location in the cardiac cycle.

MITRAL INSUFFICIENCY

The diagnosis can be made in the presence of cardiac enlargement, associated valvular disease, or a rheumatic infectious history, and a typical murmur. The murmur is systolic in time and may accompany, follow or replace the first heart sound. Its quality is variable in different cases; it may be a soft or loud blow, or musical, but to be considered typical it must be relatively high-pitched and prolonged, (higher in pitch and longer in duration than the first heart sound). It is best heard at, or just outside the region of maximum audibility of the first heart sound.

MITRAL STENOSIS

Diagnosis can be made from the presence of a typical murmur; prolonged, low in pitch, and usually of a rumbling quality; beginning a brief instant after the second heart sound. The time is diastolic and there may, or may not, be a rough presystolic crescendo present. In some cases the presystolic crescendo is the only murmur present. It is best heard with the child lying on the back or left side, and immediately after exercise sufficient to speed the pulse up to 120.

AORTIC INSUFFICIENCY

Diagnosis can be made only in the presence of a typical murmur; its quality is blowing, its pitch high; it closely resembles the pitch of normal respiratory sounds, so that it should be listened to with the child holding its breath.

It often is a faint murmur. The time of the murmur is diastolic, beginning at the end of the second heart sound, and may last through the rest of diastole or fade out at any time. It is best heard at (1) the third or fourth interspace at the left border of the sternum; (2) over the sternum at this level; (3) in the second or third space at the right border of the sternum.

AORTIC STENOSIS

The diagnosis can be made from a systolic thrill, felt best in the second interspace near the right border of the sternum (or in the episternal notch), accompanied by a loud rough systolic murmur loudest at this place. (Aneurism should be excluded and the diagnosis should not be made, unless aortic insufficiency is already proved.)

PROGNOSIS

The importance of the differential diagnosis of these last 4 murmurs lies in the prognostic value of such findings. In our experience, the mitral insufficiency, which after a lapse of time shows no tendency to progress into a double mitral lesion, can carry on through childhood with little or no difficulty. On the other hand, the double mitral murmur is typically a progressive rheumatic form of heart disease in children that tends to get worse as time goes on. It furnishes us with the majority of cases of cardiac failure and death in children. Aortic insufficiency, a much less common lesion, while perhaps as serious, tends to break down in late childhood, adolescence or early adult life.

In conclusion, may I suggest, after a number of years of teaching cardiology in children to graduate physicians, that there is a great deal of missionary work to be done in the medical world along the line of an adequate, present-day conception of the diagnosis and treatment of rheumatism and heart disease in children. This contribution to medicine can best be made by the pediatrician who, after all, best understands both the child and his heart.

DISCUSSION

Dr. J. H. Marcus (Atlantic City): Dr. Nichols indeed deserves a great deal of commendation for so vividly portraying heart lesions. This is the first time, I will admit, a portrait has been presented which impresses me. Dr. Nichols spoke of cyanosis being one of the most important symptoms. It is true cyanosis ought to be considered one of the very most important symptoms in your first approach in your diagnosis. At the same time we must not overlook the fact that cyanosis can be found in bleeding; atelectasis of the lung; in prematurity and congenitally weak infants. The negative attitude is the one that ought to be sought for first because in several cases in my own personal work I have found blowing systolic murmurs which in the course of 8 months or so have entirely disappeared. A negative attitude was assumed for the simple reason that the general condition of the child was good and we didn't see any occasion for interference.

I would like to ask Dr. Nichols whether, in performing autopsies and examining the heart of the new-born, he has ever encountered small nodules such as are described by von Reuss in his "Diseases of the New-Born"? This was brought to my attention in a case admitted to the Atlantic City Hospital in which the clinical diagnosis of septic infection was made. We could not find any portal of entry. The prominent symptom was intermittent cyanosis. Autopsy showed that this was a case of septic endocarditis because these little nodules were found on the leaflets of the valve. I was not reconciled, and in searching the literature I found that von Reuss states: "These formations of nodules on the cardiac valves of newly born known as 'hematoma of valve' are not hemorrhages, but are derived from dilation and cysts; they are residues of the process of evolution of the embryonic vascular tissue at the cardiac valve. Probably no clinical importance is attached to them."

I would also like to ask Dr. Nichols whether it is his opinion that congenital hearts are enlarged to the right and acquired hearts are more enlarged to the left.

Dr. Stanley Nichols (Long Branch): In reference to Dr. Marcus' discussion of cyanosis, I was not particularly referring to the new-born. In the new-born, as the doctor said, even if we hear a murmur, it is very wise to say very little about it for a number of months and for 2 or 3 reasons, particularly if they are premature. A little stethoscope pressure may produce some first class murmurs and a month or two later we don't find them. Some cases we know have septal lesions; in contradistinction to the fact that we were taught originally the foramen ovale closed at birth, now we know it doesn't close at all in fully 1/3 of all cases until somewhere between birth and 5 or 6 months; so they often may disappear. It is well to note it and perhaps to mention it casually to the mother, calling it slight or something of that kind. Then you have a safeguard in case one of your confrères tells of the murmur later and the mother attacks you and says, "You didn't tell me about it".

It is true that in the first month we should not

attribute cyanosis to congenital hearts unless we are very sure of them. Then we should first carefully exclude other causes. I spoke of the early cases of endocarditis in the first 2 years because the pathologists find more than we do. I am not acquainted with these nodules on the valve, the doctor speaks of, but there is often a question in my mind, if not backed up with blood cultures and other evidence of sepsis, when a baby dies for no reason we can find, whether we should accept the pathologist's report of acute septic endocarditis. It does seem that they should show unmistakable symptoms in cases we can recognize as pediatricians, because in the older children it is so unmistakable a disease. So I think we can take it, unless they have evidence of culture of bacteria in the blood, that our opinion is as good as theirs.

The question of the direction of enlargement of the heart of course depends entirely on the lesion we are dealing with. In a paper as short as this we did not try to discuss that except to speak of enlargement. The studies that are now being made by the x-raying of congenital hearts are interesting. Also, I am personally very interested in the studies by x-ray of normal hearts and hearts with acquired abnormalities. There is too much haziness in x-ray reports. For instance, they will call a heart a mitral type of heart, and it does not mean it is mitral disease at all. It simply means the roentgenologist must revise his method of labeling these hearts so they mean something clinically. Of course there are a great many congenital hearts of round type and they of course would be enlarged to the right. The left ventricle being of course the preponderant in acquired diseases, even in double mitrals, later in the course of the disease tends toward left side enlargement.

A LITTLE CHILD DID LEAD THEM

A company of doughboys in the American Expeditionary Force, from New England, were distinguished by their unusual height and weight—all big fellows. A consignment of shavetails arrived in France—destination, Company G—among whom was a little fellow of 5 feet 3 in. At his first inspection of the platoon, he turned to examine a paper with his back to his men. A fasetto voice from the ranks was heard, "And a little child shall lead them!"

Swinging around, the second lieutenant shouted, "The man who made that remark step 2 paces forward!" The entire platoon advanced 2 paces.

Biting his lip, the little officer hissed, "The man who made that remark step 2 paces to the rear!" The entire platoon retreated 2 paces.

When inspection was over, the second lieutenant announced, "Orders for the day will be posted at 12 o'clock on the company bulletin board."

A few minutes before 12 a few stragglers sauntered up to the bulletin board and found this notice posted—"Second Platoon, Company G, will report at 12:25 in full marching order, tin hats, rifles, gas masks, blankets, and knapsacks, for a twenty-mile hike—and a little child shall lead them on a damned big horse."

In Memoriam

ROBERTSON, Samuel Empey, of 60 Tuscan Road, Maplewood, New Jersey, died at his home November 8, after a prolonged period of illness.

Dr. Robertson was born in Canada 69 years ago and came to Newark 30 years ago. In 1924 the house at 31 Walnut Street, which had been the home of Dr. Robertson and his family 20 years, became the property of the New Jersey Tuberculosis League and he moved to Maplewood the following year.

In December, 1925, Dr. Robertson suffered a stroke of paralysis after entering the home of a patient in Bloomfield. He was unable to speak or move. His chauffeur carried him to his car and hurried back to Maplewood, where his condition was critical several days. About 5 months later he recovered sufficiently to be about. He resigned the Presbyterian Hospital post and from the Medical Advisory staff of St. James' Hospital on account of his condition.

Dr. Robertson was connected with the Dime Savings Institution since February, 1900, and had served as President since 1916.

He was a member of Salaam Temple and St. John's Lodge, F. and A. M., and the Essex Club.

He leaves a widow, 2 daughters, Mrs. Marie Cather, of Hazelton, Pa., and Mrs. Marian Margarum, of Sussex; 3 sons, Harvie, of Los Angeles, Empey, of San Francisco, and Graeme R., of Denville.

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YOUR INCOME TAX

Take Notice

Traveling Expenses Are Now Deductible

The patience and perseverance of certain officials of the American Medical Association, aided by some individual members of the organization, have at last been rewarded. The rank injustice perpetrated by bureaucratic action in the U. S. Internal Revenue Department, in a ruling which denied to physicians the privileges granted to other professional and business men, is to be remedied—in part at least. The departmental dictum that physicians could not deduct from income monies expended in travel when attending medical society meetings, has been overruled and set aside by higher authority. The medical profession has repeatedly protested against the ruling, and recently made an effort to have Congress rectify the matter by a special clause in the Revenue Bill, but without success until quite recently. From the Journal of the American Medical Association, October 27, we quote the following editorial announcement:

"Traveling expenses incurred by physicians in attending meetings of medical associations are deductible in the computation of their federal income taxes. The Commissioner of Internal Revenue has erred in denying the deductibility of such expenses. The Board of Tax Appeals made this decision, October 2, in passing on the appeal of Dr. Cecil M. Jack, of

Decatur, Ill. The decision becomes final at the expiration of 6 months from its promulgation unless an appeal is taken to the courts before that time. The commissioner did not appeal, however, when the Board of Tax Appeals rendered similar decisions against him in favor of ministers and of chemists, in cases identical in every essential circumstance with the present case. In those decisions the commissioner officially acquiesced, without waiting for 6 months to expire, and there seems to be no reason why he should follow a different course now. Acquiescence seems more probable, too, since the board, in promulgating its decision in the present case, cited as precedents the very cases in which the commissioner has acquiesced, and repudiated as a precedent a decision of the board by which the commissioner undertook to justify his course.

Since the Commissioner of Internal Revenue first denied to physicians their right to deduct traveling expenses, in 1922, the medical profession has paid probably as much as a half million dollars into the treasury, to avoid unlawful demands by the commissioner, the distraint of property, and suits. Subject to certain limitations on the time within which claims for refunds must be filed, all of this money will be repayable to the physician who paid it, if the courts are not called on within 6 months to reverse the decision of the Board of Tax Appeals and if on appeal they sustain the decision of the board.

Applications for refunds may be filed with-

out waiting for any further official action in the case. Unfortunately, in many individual cases the amounts repayable are probably so small that the physician will not feel justified in going to the trouble and expense of making a claim, and in many cases it will be difficult at this late date to produce adequate legal proof of the exact amounts paid for railroad fares. Pullman accommodations, hotel accommodations, meals, and other allowable expenses. Applications for refunds must be made on the special form provided for that purpose, copies of which can be obtained from the local collector of internal revenue. A separate application must be made for each year for which a refund is claimed. Every application must show that it is based on the decision of the Board of Tax Appeals in *Jack v. Commissioner of Internal Revenue*. Applications must be filed with the collector of internal revenue within whose district the refundable money was paid."

THE PASSING OF A CULT

Whatever else you neglect in the columns of this Journal do not fail to read the letter on Christian Science published in the department of "Communications". An advance rumor of what has transpired reached us during the summer while on vacation and we drew attention to the matter in a travel article last month. Now comes this full and frank statement of the attitude recently taken by an important group within the Christian Science ranks. The fact that Mrs. Eddy, herself, employed regular physicians when she was sick enough to require medical aid, or that the majority of her church followers have clandestinely pursued a like policy, is no particular news to members of the medical profession; most of us have either been called upon personally to render service under such circumstances, or are familiar with instances in which other physicians or surgeons have been consulted professionally and then requested not to let the fact become known publicly. The more important news is that feature of the

announcement which shows that, at last, a sizable group of "scientists" has awakened to an understanding and some appreciation of the "ghastly record" resulting from fanatical pursuit of Mother Eddy's teachings.

To the list of names of victims, from one Boston institution alone, we could each of us add one or more that we know to have occurred in our own communities—victims of blind faith. It is not long since, here in Atlantic City, a prominent woman, beloved by all who knew her—and that included nearly the whole community—died of appendicitis after several days of serious illness during which she received no other ministrations than those of a "reader". At the very last moment a physician was summoned but the victim of misplaced confidence died before the doctor could reach her home. A human life sacrificed to faith in ignorance—or in "fanaticism" which is a shade worse than ignorance. This is an isolated specific instance but there have been literally thousands of similar instances in this country and physicians have long been wondering how long it would take for the intelligent portion of the people to recognize the ghastly character of the accumulating record. The day has been slow in coming, and a very large number of estimable but misguided men and women (to say nothing of innocent children) have laid their lives upon the altar of credulity, but we may be thankful that at last some of the followers of this strange cult have themselves become shocked at the results of their teachings.

"The tragedies that have been permitted in the name of Christian Science by its overzealous devotees"—well, we have said nothing worse than that about them. "Its members", Christian Scientists, "are forbidden to meddle in any way with medical or surgical practice, but must leave such work to those who are qualified and legally authorized for that responsibility";—all that regular physicians have ever claimed, or charged against them. We have never protested their right to any religious views they cared to hold, nor to any form of worship they chose to follow; our sole objection has been based upon their med-

dlesome interference in matters with which they were not qualified to deal.

Now, what does this reported action of a group of "scientists" mean? In the first place, it probably means a split in the church—a new schism. It is not the first one, but this time there is a ray of hope, because, the pronunciamiento says they "are endeavoring to bring a spirit of sanity and common sense into the practice of mental healing". Let us wish them good luck in this effort. One can only guess how far the movement will go, but we are inclined to believe that this is the "beginning of the end" of Christian Science as a medical cult.

PROGRESS OF OTHER CULTS

In line with the preceding editorial, we feel that this is an opportune time to call attention to some recently reported evidences of the passing of other cults—notably osteopathy and chiropractic. At the last Annual Meeting of the American Medical Association, the Council on Medical Education reported that the number of schools teaching osteopathy has decreased from 13 in 1920 to 8 in 1927, and the number of chiropractic schools from 79 in 1920 to 40 in 1927. Far more important is the diminishing number of candidates for practice undertaking study in these institutions. Concerning this point, the report says:

"There is not only a rapid decrease in the numbers of cult institutions but also in the enrolments of students and in the numbers of graduates turned out each year. Instead of having thousands of students enrolled and enormous classes graduating, the highest claim of any osteopathic college at present is an enrolment of 750 students and 110 graduates. Altogether, the 8 osteopathic colleges during the last year approximately enrolled only 2000 students, of whom about 400 graduated.

Likewise, the largest of the chiropractic colleges, the Palmer School, at Davenport, Iowa, had only 316 students, where 8 or 10 years ago the number exceeded 2000. Of the 40 existing chiropractic schools, actual figures regarding the enrolment of students were obtained for 38, the total enrolment being 1756

students. Figures were also obtained for 28 of the schools showing the total number of graduates as 632. A liberal estimate places the total number of students in the 40 institutions at less than 2000 and the number of graduates as not exceeding 700.

Another group of cult schools of any moment consists of the 12 colleges of naturopathy. Students were found enrolled in only 7 of these schools, and only 4 boasted of graduating classes. The total number of students actually found in these institutions was 109, and only 58 were listed as graduates. The highest estimate of students in these 12 institutions would not be over 200 and the total number of graduates not over 100."

As regards the passing of chiropractic, no less an authority than B. J. Palmer, "the daddy of chiropractors", addressing a meeting of that clan in Philadelphia, February 26, 1928, is reported (*Federation Bulletin, State Medical Boards*, 14:103, April, 1928) to have said:

"Chiropractic is doomed. You have drifted so far from the basic principles of chiropractic that you have lost your identity and brought the basic science bill upon your heads. Twenty-eight chiropractic schools have closed recently, and many others will follow. The supreme courts in 7 states have handed down legal injunctions during the last 18 months, whereby these states are lost forever to chiropractic. I warned Ohio not to compromise. They tried to pass a bill engrossing medical principles and practices. I predicted its failure. It lost by 250,000 votes. There has been \$250,000 of chiropractic money spent in California in the last year. You cannot defeat the ends of science. The basic science bills are the buck shot which we deserve for trespassing. When chiropractors preach and practice and try to become physicians, then it is justifiable for the medical men to educate the chiropractor. Now beat that argument if you can. That is why we are losing right along. This will probably be the last time you will see me as a chiropractor, as I do not propose to lose my good money in fighting against sound arguments."

STATE LEGISLATION

The next General Assembly of New Jersey will convene in January and it is safe to assume that there will be the usual large influx of proposed new laws; also, that among the "Bills" introduced we may expect to find one or more covering attempts of uneducated and untrained persons to procure licenses to practice medicine. It is even now rumored that the osteopaths and chiropractors will repeat the efforts of previous years to secure an extension of their limited practice privileges, and we need not be surprised to see the naturopaths and cosmetologists once again seeking special privilege legislative endorsement.

The Welfare Committee of the State Medical Society held its first meeting of this season at Trenton, October 28, and a full report of its proceedings will be found in this issue of the Journal in the department of Current Events. This committee will, of course, continue its policy of opposing such legislation as is referred to above, because of the certain disastrous effect it would have upon the public health. The committee has no legislation of its own to offer at the coming session of the Assembly, but it has endorsed and will aid, in so far as possible, to secure the passage of 2 Bills that are of considerable import to the profession.

The State Medical Society and the State Bar Association have evolved a measure designed to safeguard the public interest in justice and to protect the honor of our noble professions. Gross abuse of "expert testimony" has long been a stench in the nostrils of all honest men. Unscrupulous attorneys have been to blame for miscarriage of justice in many instances, through clever manipulation of "expert medical testimony", but scarcely less blameworthy were the medical men who permitted themselves to be used for such base ends. It is safe to say that in the vast majority of instances the abasement of such medical testimony has been attained through the connivance of a representative of the medical profession quite as unscrupulous and

dishonest as the lawyer who employed or directed him in court; it could hardly happen otherwise. Speaking only for our own people, we can say that all honest physicians deplore the present situation and wish to see it corrected. It is not possible to prevent all dishonesty. Both sides to any legal controversy have the technical right to introduce evidence in support of their claims, and, so long as there exist venal doctors it will be possible to purchase "expert medical testimony". But, we can make it possible for each and every Court to procure unbiased, scientific, expert testimony for its own guidance in strongly contested cases; and that procedure will not only safeguard the ends of justice, but will, by contrast, make it increasingly difficult for shady experts to "get away with murder".

Next, the State Hospital Association will sponsor a Bill to protect hospitals, physicians and nurses as regards their financial interests in patients taken under treatment as the result of accidents or emergencies; by making accounts for services rendered a lien against money damages awarded to such patients. Not infrequently the victim of an accident receives a considerable sum of money as an award for damages, but the institution or individual that rendered life-saving service at the critical moment gets no compensation for service or material supplies. It is only reasonable and fair that such medical aid should be paid for out of the acquired fund.

The Welfare Committee requests every member of the State Medical Society to read and familiarize himself with these 2 Bills, the first of which is published in this issue of the Journal and the second will be published shortly, and to see his Assemblyman and State Senator immediately with a view to securing support for adoption of these measures into the law. Attend to this at once and save us a lot of work—labor that ought to be unnecessary—at Trenton. When you have secured the promise of your legislative representatives, report that fact at once to the Chairman of the Welfare Committee, Dr. Andrew F. McBride, 30 Church Street, Paterson, or to the Editor of the Journal.

Collateral Medical Reading

In this department, the Journal presented last month an interesting review of a recent book of semiprofessional character and a magazine article dealing with one of the prominent conversational topics of the day. For this issue we have chosen to republish in its complete form, an article that appeared in Harpers Magazine for June, 1928. As it deals with the subject of ethics we will omit this month our usual short article under that heading in order to have sufficient space for this longer essay. It is a masterly dissertation by one of the world's Master Minds. Concerning the author it is unnecessary for us to say anything in the line of introduction or in the nature of praise. His name and fame are so well known that no complimentary phrases can add lustre to his reputation.

SCIENCE AND ETHICS

By J. B. S. Haldane

(Reprinted, with permission, from Harpers Magazine of June, 1928)

Science impinges upon ethics in at least 5 different ways. In the first place, by its application it creates new ethical situations. Two hundred years ago the news of a famine in China created no duty for Englishmen. They could take no possible action against it. Today the telegraph and the steam engine have made such action possible, and it becomes an ethical problem what action, if any, is right. Two hundred years ago a workman generally owned his own tools. Now his tool may be a crane or steam hammer, and we all have our own views as to whether these should belong to shareholders, the state, or guilds representing the workers.

Secondly, it may create new duties by pointing out previously unexpected consequences of our actions. We are all agreed that we should not run the risk of spreading typhoid by polluting the public water supply. We are probably divided as to the duty of vaccinating our children, and we may not all be of one mind as to whether a person likely to transmit club-foot or cataract to half his or her children should be compelled to abstain from parenthood.

Thirdly, science affects our whole ethical outlook by influencing our views as to the nature of the world, in fact, by supplanting mythology. One man may see men and animals as a great brotherhood of common ancestry, and thus feel an enlargement of his

obligations. Another will regard even the noblest aspects of human nature as products of a ruthless struggle for existence, and thus justify a refusal to assist the weak and suffering. A third, impressed with the vanity of human efforts amid the vast indifference of the universe, will take refuge in a modified epicureanism. In all these attitudes and in many others, there is at least some element of rightness.

Fourthly, in so far as anthropology is becoming scientific, it is bound to have a profound effect on ethics by showing that any given ethical code is only one of a number practiced with equal conviction and almost equal success, in fact, by creating comparative ethics. But, of course, any serious study of the habits of foreigners, whether scientific or not, has this effect, as comes out plainly enough in the history of ancient Greek ethics. Hence, science is not wholly responsible for the ethical results of anthropology.

Finally, ethics may be profoundly affected by an adoption of the scientific point of view, that is to say, the attitude which men of science, in their professional capacity, adopt toward the world. This attitude includes a high (perhaps an unduly high) regard for truth and a refusal to come to unjustifiable conclusions which expresses itself on the plane of religion as agnosticism. And along with this is found a deliberate suppression of emotion until the last possible moment, on the ground that emotion is a stumbling block on the road to truth. So a rose and a tapeworm must be studied by the same methods and viewed from the same angle, even if the work is ultimately to lead to the killing of the tapeworms and the propagation of roses. Again, the scientific point of view involves the cultivation of a scientific esthetic which rejoices in the peculiar forms of beauty which characterize scientific theory. Those who find an intimate relation between the good and the beautiful will realize the importance of the fact that a group of men so influential as scientific workers are pursuing a particular kind of beauty. Finally, since the scientist, as such, is contributing to an intellectual structure that belongs to humanity as a whole, his influence will inevitably fall in favor of ethical principles and practice which transcend the limits of nation, color, and class.

Personally, I believe that the second of these relationships between science and ethics is that in which science is most beneficial. By complicating life science creates new opportunities of wrongdoing, by altering our world-view it may lead us into one form or another of ethical nihilism; it can never do us harm by pointing out to us the consequences of our

action. But the enemies of science will claim that just because at present, in so far as it concerns itself with human beings, it deals with their bodies rather than their souls, it will lead us to neglect the higher forms of duty to our neighbor. On the whole, I accept this indictment, and glory in it, although, since I do not believe in a detachable soul, I regard the good of the body as the good of the soul too, each being the whole man looked at from a particular point of view. But I welcome this apparent debasement of ethical aims for another reason.

As long as my services to my neighbor are confined to feeding him when hungry, or helping him to raise his wages, and tending him when sick or preventing future sickness, and so forth, I am probably following the Golden Rule, for I do not want to be hungry, poor, or sick, and few of my neighbors are good enough Christians to do so. But if I soar above the mere claims of the body I shall try to educate my neighbor against his will, convert him to my particular brand of religion or irreligion, or even to psycho-analyze him. As I do not personally want to admire Gertrude Stein, worship a biscuit, or remember the moral lapses of my infancy, these forms of charity are very liable to be breaches of the Golden Rule; and if they are carried too far they may well develop into missions to the heathen or even crusades.

I confess that I am not appalled at the thought of an ethical system in which the only goods with which we attempted to provide our neighbors were of the most material character and in which hygiene took the place of salvation. So much nonsense is put about in the name of hygiene that the idea is naturally repugnant to many people. For hygiene has furnished a new weapon to the numerous persons who either desire to interfere with the lives of their fellows or to exploit their fears. As religion declines, the man who would have sold relics in the past turns his attention to pills, and the belief in the danger of Sabbath-breaking is replaced by that in the danger of bad smells, although tanners and glue-boilers are healthier than the average population.

In view of such facts it requires considerable education to preserve one's health, and, since the education in question is biologic, and I am a biologist, it is natural I should like to see it universally diffused. If the great aim of education is to know yourself, it is essential to begin at the beginning, namely, with anatomy and physiology. If an almost equally important aim is to promote human solidarity, it is in the realm of hygiene that this is most completely displayed. On the political and

economic plane my neighbors' misfortune may be my advantage; in that of hygiene this is never so, as Carlyle pointed out long ago. As long as we maintain slums and dusty occupations we shall have foci from which the tubercle bacillus can attack the well-to-do. As long as we have families of 6 in a single room we shall be unable to prevent the spread of diphtheria or measles. This solidarity against pathogenic microorganisms extends beyond the boundaries of nationality, race, or even species. Every Roumanian infected with infantile paralysis, every Indian with smallpox, every rat with plague, diminishes the probable length of my life. The pessimistic psychologists tell us that men can only be combined in large numbers by hate and fear. As long as a single infectious disease remains in existence there will be suitable objects of hatred and fear for humanity as a whole.

I am not a materialist, but I do not think that the influence of materialism on ethics is wholly bad. Not only does it banish many imaginary goods and evils, but it calls attention to a case where egoism and altruism are the same. And a materialistic criterion, such as health, has the immense advantage over a hedonistic one, such as happiness, that the health of two men can be compared while their happiness cannot.

II

To my mind the greatest danger to which our ethical system is exposed from science is not a debasement of values for such reasons as I have sketched, but the deliberate exploitation of scientific ideas in the interest of unscientific prejudice. I cannot choose a better example than the recent lecture on "Scientific Ethics" delivered by Dean Inge to the British Science Guild, a body which, I may remark, represents applied rather than pure science. I should be surprised if the Dean had devoted as much time to the study of science as I have to that of Christianity (for I attended 2 Christian schools), yet I fear that a lecture by myself on Christian Ethics would be regarded by the Dean as, at best, blacklegging, at worst, blasphemy. For he has done me the honor to state that I am prejudiced concerning religion; though agnosticism, being a refusal to make up one's mind at all, is surely the very opposite of prejudice, which is the making up of one's mind before hearing the evidence.

A fair proportion of the Dean's discourse was devoted to diatribes against the Roman Catholic Church, which, it appears, in several respects respects less scientific than the Protestant organizations. I confess that, as an impartial

outsider, I hope that as long as there are an appreciable number of Protestants they will be balanced by some Catholics; for while both bodies have been about equally hostile to truth, the Catholics have on the whole been kinder to beauty. And as long as the Anglican Prayer Book includes prayers for rain and for the satisfactory functioning of the organs of the royal family, for a Dean to animadvert upon Lourdes is simply a case of the pot calling the kettle black.

In so far as the Dean exalts truth, attacks supernatural dualism, and realizes that evolution implies the rights of animals, I think that everyone will be in agreement with him. How little importance is attached to truth as such in our society appears very clearly in a recent judgment of Mr. Justice Humphreys, in a case where a beauty specialist sued a rival for using a phrase which he had invented to advertise his business. The Judge held that the phrase was arresting and original—for one thing, because it was obviously untrue—and that it came within the copyright act. I do not think that he would have adopted so complacent an attitude had the phrase been obscene or seditious, and I doubt if a state permeated by scientific ethic would lend the support of the law to private property in lies. But with regard to the more detailed applications of biology to ethics, and especially in regard to his views on eugenics, I am afraid that I am a better Christian than the Dean. Perhaps I may be excused for writing at some length on this subject because I have a considerable first-hand knowledge of animal and plant breeding, and have to some small extent advanced knowledge concerning heredity.

Let us first turn to the facts which are known with certainty. We know the laws which govern the inheritance of a number of defects. Some of these, like color-blindness, are trivial, provided locomotive drivers and navigators of ships can be so tested as to exclude color-blind men from these occupations. Others, such as short fingers, are unsightly, and may be a serious handicap. A third class, such as hemophilia (failure of the blood to coagulate) and some types of deaf-mutism are dangerous to life or make a normal and useful life impossible. Now these maladies are inherited in several different ways, and the type of inheritance determines the possibility or otherwise of eugenic action with regard to them. If all short-fingered persons were massacred tomorrow this condition would be pretty completely abolished. But if all the hemophiliacs were killed off it would take hundreds of generations before the proportion of them in the general population

would be halved. Now I think that bearers of such hereditary complaints should be warned as to the type of children that they are likely to beget, and given every possible opportunity to avoid doing so, but I do not think that in the present state of public opinion any compulsion should be exerted on them. The time for that may come if attempts spread over several generations to persuade them to limit their families are a failure. But about the same time public opinion will perhaps be ripe for the discouragement, in the interests of hygiene, of deans and others who spread the view that any but a very small class of diseases can be cured by prayer.

The inheritance of other desirable and undesirable characters is far less clearly understood. Feeble-mindedness is fairly strongly inherited, but unfortunately it is generally inherited in such a way that the segregation or massacre of the feeble-minded, even if continued for several generations, would not stamp it out. The feeble-minded, unless they mate with one another, do not necessarily produce feeble-minded children. If, therefore, the feeble-minded are to be segregated, it should be in their own interests, and because they are unfit to bring up a family, quite as much as on eugenic grounds.

But the most controversial, and to my mind the least scientifically grounded of the proposals of the Dean and other eugenists who think like him relate not to a few small groups of the population, but to large numbers. In the first place, he congratulates the United States on stopping the flood of immigration from Southern and Eastern Europe. Now politically this may be a wise measure. The countrymen of Lenin and Mussolini probably do not make such good Babbitts as the races of Northwestern Europe. And on the whole, they do not score as highly in so-called intelligence tests of the particular type current in the United States. Whether such a failure has any significance could probably be determined by the scientific methods which are being applied to such tests by Spearman and his pupils in England. But even if the average Italian is stupider than the average Swede—which may be the case—either or both of the following facts may still be true: genius of certain types may be commoner among Italians than Swedes, and as the result of crossing these 2 peoples a type in many ways finer than either may be produced. This is certainly the general rule with animals and plants, and history suggests that it is true of men. Until these possibilities have been disproved, the exclusion of Southern Europeans from the United States cannot be justified on eugenic

grounds. And, if, as is very possible, they are better adapted than the inhabitants of Northern Europe for life in the Southern States it may be an extremely short-sighted measure.

III

The same criticism applies to the question of the differential birth rate in different social groups within the same state. It is true that in England the rich breed more slowly than the average, and the skilled than the unskilled laborer, and that infantile and other mortality does not compensate for this difference. This phenomenon has only gone on for about 2 generations, and it is very probable that with further social progress it will cease; for in Stockholm where the poor do not live in slums, and birth-control is pretty universally practiced, the rich have rather more children than the poor. Although it is certainly not scientifically proved, it seems likely that there is a correlation between wealth and the hereditary factors determining intelligence, because the well-to-do include many families of the professional classes in whom intelligence is undoubtedly hereditary, and the unskilled laborers include the majority of the feeble-minded. We do not yet know enough about the inheritance of mental ability to be able to say that a few generations of selection against it would weed it out to an appreciable extent, though this may quite probably be the case. But if we grant the case of the extreme eugenist, what is the remedy? The Dean would like to penalize the slum-dwellers who still produce large families, and other eugenists (though few, if any, scientific students of heredity) have condemned the spending of public funds to ameliorate the lot of the poor on similar grounds. If such is really the teaching of biology there is a serious conflict between science and the dictates of the conscience of most enlightened men and women. And this alleged conflict is one ground for the distrust of science and its teachings which is very widely felt.

In my own opinion the dictates of biology are exactly opposite, and on the whole in line with those of humanitarian ethics. If a difference in effective fertility exists between the rich and the poor, it seems to me profoundly illegal to attempt to remedy it by making the rich richer and the poor poorer. It is true that such an attempt might succeed if the poor were made so poor as to bring their infantile mortality up to about 50%. But that would lower their physique and also create foci of disease which would attack the rich. It would be better to send armored cars

through the slums from time to time, with special instructions to fire upon women and children. The correct remedy for the differential birth rate would seem to be such a raising of the economic standards of the poor as would give them the same economic incentives to family limitation as exist among the rich, and such an equalization of educational and other opportunities as would lessen these latter incentives. The example of Stockholm shows that the differential birth rate need not exist in a highly civilized community. I have stated elsewhere my personal views on the economic and other measures which would serve to equalize the birth rates in different classes. As they have perhaps a somewhat political flavor, I shall not repeat them here. Suffice it to say that they do not commend themselves to the Dean of St. Paul's.

Other self-styled eugenists take a still more extreme view of innate human inequality. They suppose that moral qualities are inherited to much the same degree as physical and intellectual. It is true that brothers resemble one another in these respects about as much as in physical and intellectual qualities, but this is probably largely a matter of environment. It is, after all, a matter of common sense that it is easier to make a bad boy good than a stupid boy clever. Human experience has agreed to attach the social sanctions of praise and blame to qualities on which environment has a fairly large influence; and on the whole, scientific observation goes to confirm common sense. There is probably such a thing as an eradicable moral imbecility, just as there is an acquired moral imbecility due to lethargic encephalitis, but these would seem to be a good deal rarer than hereditary stupidity. Science does not, of course, support the doctrine of human perfectibility. But it does tend to uphold the view that this doctrine is much more nearly true in the sphere of ethics than in that of intellect—in other words, that mankind is more readily modified by moral than intellectual education. And of the principles of moral education we know very little. We know, indeed, that such an education based on religion is by no means an infallible guide to conduct, even in an age of faith. In an age of reason it often results in young people, who generally lose their faith at a critical period of their lives, supposing that there is no rational basis for right conduct. We know, both from individual cases elsewhere, and from the great example of the Third French Republic, that such an education can be successfully conducted on purely secular lines. But it should, I believe, be one of

the principal functions of an ethical society to investigate the relative efficacy of different types of ethical propaganda. My own small experience suggests that there are great individual differences between different children in this respect; some, for example, being greatly moved by the stories of noble lives, others, who may yet readily absorb example or abstract precepts, being very little so.

But to return to eugenics, if a great deal which to my mind is both unscientific and immoral has been advocated in its name, I am certain that it has a very great future as an ethical principle. The more we learn as to what desirable qualities are inheritable, the more we should seek these qualities in our own spouses. Now, one does not fall in love as the result of a system of marking beauty, intelligence, virtue, and so on, each counting for so much. But one does so as the result of the weight which one has given in one's appreciation of the other sex to these various qualities. As a biologic outlook becomes commoner this weight will tend to vary. Length of pedigree will seem less important than soundness, wealth than health, education than intelligence. But just because eugenics is an ethical principle, it should begin at home, like charity, and influence individual conduct before public policy.

Hygiene and eugenics are, in all probability, only the first of a series of new spheres of duty which biology is opening up. To take only one example—at the present moment our only clear duty to animals is to spare them obvious physical suffering. As we learn about their psychology we shall know better. It is quite possibly as cruel to keep a pet rat in a light and airy cage as to lock a dog in the cellar all day; and it is already the duty of everyone who keeps animals to acquaint himself with the elementary principles governing nutrition.

Ever since the utilitarian movement ethics have become more and more a matter of the calculation of consequences. We may reject the criterion of the greatest happiness of the greatest number, either because it is incalculable, or because happiness does not appear a sufficiently noble goal; but we are all or nearly all agreed that actions must be judged by their probable consequences, and not by any code which does not envisage such consequences. We have not yet gone very far toward calculating these consequences scientifically. In the doubtful cases only scientific method will help us. The question, for example, whether I should subscribe \$5 to the Cancer Hospital or the Cancer Research Campaign depends on the value which I attribute

to research. As a careful study of the paths by which cancer cells migrate from the breast has been largely instrumental in reducing the mortality from breast cancer to about 10% in the early operated cases, I am personally in favor of research, but I have not got the quantitative knowledge of how far \$5 goes in research and treatment respectively which would enable me to form a definite judgment on the question. And in the present state of affairs any statistics available would be directed to proving a case rather than arriving at the truth.

If it our duty to envisage, so far as possible, the consequences of our actions, it follows that we must deliberately attempt to suppress our emotions until this investigation is completed. Bentham attempted to do so, but with the passing of utilitarianism and the growing realization of the importance of the emotional side of the human mind, few have tried to follow his example. Yet only on such lines can scientific method be applied directly to ethical problems. Such an application can hardly be said as yet to exist. We do not realize how largely a scientifically based code of ethics would depend on statistical data. The moment we begin to study statistics new duties appear. Let us take an apparently trivial choice—shall I buy a glass or pottery bowl for my flowers? I turn to the occupational mortality statistics and find that though the mortality of glass workers is above the average, that of potters is still higher. Other things being equal, I ought to buy glass. If we knew enough no choice would be trivial, and it is our duty to acquire the knowledge which will enable us to moralize our every-day actions, both by the study of available statistics and by encouraging statistical inquiry elsewhere.

IV

But does science reduce ethics to mere calculation? It is true that science from its nature can only say what is, was, or will be, and not what ought to be. It cannot, of course, give an answer to the question, "Why should I be good?" There is in the long run no answer to that question, for a previously good action ceases to be good in so far as it is directed to any nonethical end. But our views as to the status of good action are profoundly affected by our views of the universe. If good corresponds to nothing more objective than our individual preferences, the good life appears to us more heroic perhaps, but also rather futile. Now the tendency of science in its early stages, as it cleared away the jungle of mythology, was to leave the human individual, apparently isolated. Eighteenth-cen-

tury rationalism, which did not succeed in replacing Christianity, though it affected human thought profoundly, was such a philosophy of isolated individuals.

It seems to me that modern science makes this isolation far less plausible than it seemed 200—or even 50—years ago. The older science either supposed that the universe and the human body were mere machines, or that they were machines to some extent guided by God and the soul respectively. No facts are known to science which give any serious support to the latter view. But it does not follow that the former is correct. The human body is composed of cells, and the cells of atoms. Many of the cells can be cultivated outside the body. They have a life of their own, and can live a Robinson Crusoe kind of existence in suitable surroundings. Hence they do not derive their life from the soul or anything outside themselves. But their co-operation manifests itself in the life of the whole man, and more particularly in his consciousness. A study of the effects on the mind of brain injuries makes it fairly certain that consciousness depends, not on any one cell, which might be the seat of the soul, but on a very large number. Yet every attempt to find forces other than those of ordinary physics operating within the organism has been a complete failure, and the success of modern medicine and animal and plant breeding are at least pragmatic justifications of that point of view. The mutual relations of the atoms constituting the cell seem also to be describable in terms of physics and chemistry. Nevertheless, life, organic unity, and consciousness are facts a good deal more certain than the existence of cells and atoms. It is clear that aggregates of a certain kind do manifest qualities which we cannot observe in their components.

The doctrine of emergence, which is widely held today, is that aggregates may have qualities, such as life or consciousness, which are quite foreign to their parts. This doctrine may conceivably be true, but it is radically opposed to the spirit of science, which has always attempted and has on the whole succeeded to explain the complex in terms of the simple. We do not find obvious evidence of life or mind in so-called inert matter, and we naturally study them most easily where they are most completely manifested; but if the scientific point of view is correct, we shall ultimately find them at least in rudimentary forms, all through the universe.

Now if the coöperation of some thousands of millions of cells in our brain can produce our consciousness, the idea becomes vastly

more plausible that the coöperation of humanity, or some sections of it, may determine what Comte called a Great Being. Just as, according to the teachings of physiology, the unity of the body is not due to a soul super-added to the life of the cells, so the super-human, if it exists, would be nothing external to man, or even existing apart from human coöperation. But to my mind the teaching of science is very emphatic that such a Great Being may be a fact as real as the individual human consciousness, although, of course, there is no positive scientific evidence for the existence of such a being. And it seems to me that everywhere ethical experience testifies to a super-individual reality of some kind. The good life, if not necessarily self-denial, is always self-transcendence. This idea is, of course, immanent in the higher religions, but the objects of religious worship retain the characteristics of nature-gods or deified human individuals. It was more satisfactorily expressed by Comte; but there is much in positivism as originally conceived by him which seems unnecessarily arbitrary.

Just because any formulation of the nature of such a being has ultimately fallen below the best in our own moral consciousness, religions, though at first a help, later become a hindrance to ethical progress, and we too shall do no good by premature theorizing. But just as, starting from the basis of chemistry, biochemists are gradually explaining the phenomena of life, so from a basis of psychology our descendants may build up a scientific ethics which may be at the same time a scientific theology. Much of modern psychology is, I suspect, mere cerebral physiology. I do not see, for example, why we need postulate any "Unconscious" other than certain parts of our own brains. It may well be that the main psychology of the future will be social psychology, just as I believe that in 50 years the most important branch of chemistry will be biochemistry. In this way we may hope that ethics will ultimately be brought within the sphere of science.

At present the only branch of science which is concerned with moral conduct as such is anthropology. One branch of that science is concerned with human societies, and analyzes the various factors influencing conduct in them. Most of these analyses, of course, bear on the simple institutions of primitive peoples. The anthropologist can observe them from outside, and need not take sides in a dispute, say, between a witch-doctor and a witch. Anthropologists are generally agreed that the magic and religion of primitive peoples are essential parts of their social system, and hold

that missionaries destroy the very foundations of society when they introduce Christianity or Islam. Now the same argument is applied by certain anthropologically-minded persons to our own society. They hold that, although most of Christian dogma is untrue, the Church is as essential to the stability of European society as the fetish-house to that of West African. We cannot dismiss this point of view because it is somewhat derogatory to human nature. If science does not indorse the prophet's view that "The heart is deceitful above all things, and desperately wicked," it is equally far from regarding it as perfectible by a change of environment.

The first obvious point that arises is that, while the anthropologist might regard the Church as essential for the stability of society, he would certainly not regard its moral code as correct. For the behavior of Christians, like that of other men, has always been a compromise between that dictated by their moral code and their private inclinations. But that moral code has never, at least among those Christian peoples who have advanced civilization, been purely Christian. The governing classes in Europe have generally kept before them the ideal of honor in one of its many forms. This is an ideal based on pride rather than humility, on self-realization rather than self-denial. It has generally been linked with some form of family pride or patriotism. It has, of course, had its aberrations, but they have been a natural reaction against the abjection into which the Church has attempted to force the spirit of man. In the somewhat modified form of sportsmanship this code is current among all classes in England today. I am not a sportsman myself on week days but, as I do not recall myself a miserable sinner on Sundays, I can at least attempt to practice a more rational morality during seven days a week.

Our anthropologist, then, would have to demand the existence of a non-Christian moral ideal beside that of Christianity, trusting to human weakness to see that neither was too strictly enforced. Now the present moral crisis is due, among other things, to the demand for a moral code which shall be intellectually respectable. The existence of that demand, encouraged as it is by the success of rationalism in the sphere of science, is no doubt a serious matter, but the demand is growing daily. And it comes at a time when applied science has created so many new moral problems that the morality of our ancestors must in any case be drastically revised. Until now poverty and disease have been inevitable evils to be palliated by the exercise of the vir-

tue of charity. With the means at our disposal today we could abolish all poverty and most disease. But the moral energy required for these purposes is still directed into less efficient channels. In the same way our sexual morality has been adjusted to produce the high birth rate demanded by a high death rate. It is now being rather painfully altered to meet the new social demands upon it.

If, then, our moral code must, in any case, be recast, we are justified in demanding that it be recast on a rational basis. The impossible demands attributed to the Christian god made it necessary to create the devil to counterbalance him. A morality based on science would be quantitative, as was Greek morality. The ideal of the Greeks was a word often translated as *the mean*, but perhaps more accurately as *the measured*. But this ideal only applied to social conduct, for example, to spending one's income on the pursuit of pleasure. In this sphere it is quite clear that science will be able to help us. Economics and hygiene are already beginning to do so. But even Greek morality, as we find it codified, for example, in Aristotle's ethics, was not merely quantitative. A man might eat too much, or expose himself to too much danger, and so on, but he could not have too much knowledge or too much moral intuition. And Christian ethics replaced those of the ancients largely because they made unlimited demands on the human spirit, and it does somehow respond to such demands. I doubt if any morality which does not do so will get the maximum response from man.

A scientific morality which proclaimed that man existed as part of a greater aggregate could yet admit that he had claims as an individual. The cells in our own body cooperate in its life, but yet live, so to speak, very comfortably as compared with individualistic protozoa. And as long as I act, in general, as a member of society, I believe that I shall do so the better, and not the worse, for having a good dinner and taking holidays. If the Great Being is wholly independent of individual men, their well-being must be disregarded in its service. If it exists through them and only through them, their rights are its rights. The morality of the future will, I believe, contain elements of both Greek and Christian moralities. The vague conception of the mean will be rendered exact by quantitative science and the ideal of self-sacrifice will be rationalized as cooperation in a real and intelligible super-individual reality.

But today we are very far from any such blessed condition. Yet we can begin, as I have shown, to apply scientific method both

to individual moral problems and to the problem of morality itself. The time required for so great a task must be measured on a historic, perhaps even on a geologic, time-scale. But it represents the unification of human effort, the marriage of the mind and the heart, the moralization of science, and the rationalization of ethics. Let us be thankful if we can play any part, however small, in so great an enterprise.

Medical Economics

A WAY TO SIMPLIFY NEXT YEAR'S INCOME-TAX

By a Michigan Physician

(Reprinted from Medical Economics, Aug., 1928)

Somewhere between the first and the twentieth of each January, Uncle Sam sends out income-tax blanks. To most people the making out of the income-tax report is more intricate than the putting together of a jigsaw puzzle and is far less fun.

Doctors, especially, regard this labor as the *bête noire* of each calendar year; first, because as professional men, they have little or no knowledge of bookkeeping; and secondly, because they are gripped by a combination of fear and laziness which have their roots in man's essential dislike for unaccustomed tasks.

The business of sitting up until midnight and covering reams of paper with meaningless figures is not at all necessary. Neither is the fear nor the dislike. A doctor's bookkeeping can be so simple that these factors are eliminated. One ledger, when properly used, will solve the doctor's problem.

Chart I gives pictorially what follows below. The ledger is always opened on a double page, with the date written across the top. Below the date, on the left-hand side of the ledger, there appears the word *income*; on the right-hand side, is the word *expenditure*.

The left side, under the word *income*, has 4 columns. One, for the names of patients. Two, for the charges, which may be done in red ink. Three, for cash received during the day. Four, for income brought forward from the preceding days of the month.

The right-hand side of the ledger, under the word *expenditures*, has 3 columns. One, for purchases of deductible items paid for during the day. Two, for the amount expended for each. Three, for the sum of expenditures brought forward from the preceding days of the month.

The first column on this page should contain the names of those items which you have *paid* for, and those only. If you have charged a purchase, enter it only at the time you pay for it.

Ruling the blank pages of your ledger as I have indicated may be accomplished in one of several ways. Your office girl can do this in her spare time, or, if you haven't one, you may ask your wife to aid you in this way.

You may even do it yourself, if you have 15 or 20 spare minutes, which are sufficient for ruling enough pages for a week's entries. In the event that none of these methods suits your purpose, you may, for a trifling sum, have your local printer rule the leaves of a loose ledge in this fashion.

As you will note, and as I explained in another of my articles appearing in a previous issue of *MEDICAL ECONOMICS*, I discourage charge accounts. Hence the column for

CHART I
Daily Page of Ledger
Monday, February 6, 1927

Income			Expenditures			
	Charges	Cash	Balance Brought Fwd.		Cash Deposited	Balance Brought Forward
Patient				Purchases		
Wm. Jones		\$ 3.00	179.50	Gasoline and Oil	\$ 3.75	\$139.00
Helen Anders (note)* ..		25.00		Chains for Car	4.25	
H. J. Spence		2.00		Subscription Med. Jour..	5.00	
John Brown		2.00		Phones (House & Office)	14.00	
Alex Johnson		3.00		Drugs	7.95	
Guy Horn (credit 1-1-26)		7.50		Stamps97	
Mrs. J. Coxwell	5.00			Miscellaneous	1.25	
Herbert Rogers		2.00				
L. A. Smith	3.00					
Check on Injury						
Olaf Carlson 11-18-26.		125.00				
		\$169.50			\$37.17	

*See text

charges has few entries, and those are almost all for outside calls.

Each day the ledger's charges are transferred to cards, and bills are made out from these every fifteenth and thirtieth of the month. Perhaps in a month there are 50 of these. As soon as they are paid, the cards for them are destroyed, as the case record is not on them.

These accounts appear on my ledger thus: Guy Horn, (Credit, 12-1-26.), with the amount paid in the cash column. (See Chart I.) I have found this a very practical method of reducing the filing work in the office and of obviating mistakes involving duplication of bills, with a consequent loss of the patient's good will.

and use 2 of the rooms for office purposes, you may list one-third of your rental as a deductible item. Office rental is clearly an expense in conducting your practice and may be subtracted from your gross income, unless (this is important) you own the building in which your office is located. In that event, you may make other charges, one of which is on your business property. Another is for depreciation on the same property, for which you may allow but 3% per annum.

Before going on with the question of depreciation I am listing below the items which you may charge against your gross income. They carry with them a short explanation of how they are compiled.

(1) Office rent paid to another.

CHART II-A
Month of February, 1927

Balance Sheet	
Gross Income	\$925.25
Expenditures	705.00
Net Income	\$220.25

Deductible Expenditures	Amount	Balance Brought Forward
Auto up-keep	\$ 40.00	\$ 55.00
Rent	125.00	125.00
Int. on Business Debts	15.86	15.00
Taxes	163.72	
Telephone	14.00	16.00
Electricity	12.92	19.25
Laundry	6.25	7.50
Salaries	165.00	165.00
Office Supplies	12.00	10.00
Drugs & Surg. Supplies	110.75	205.00
Charities	7.50	9.00
Bad Debts	32.00	
Miscellaneous		
Total	\$705.00	

CHART II-B
Month of March, 1927

Balance Sheet	
Gross Income	\$850.50
Expenditures	526.53
Net Income	\$323.97

Deductible Expenditures	Amount	Balance Brought Forward
Auto up-keep	\$ 42.75	\$ 95.00
Rent	125.00	250.00
Int. on Business Debts	16.72	30.86
Taxes		163.72
Telephone	17.25	30.00
Electricity	11.55	32.17
Laundry	8.00	13.75
Salaries	165.00	330.00
Office Supplies	8.00	22.00
Drugs & Surg. Supplies	97.26	315.75
Charities	10.00	16.50
Bad Debts	25.00	32.00
Total	\$526.53	

Sometimes I accept a patient's note in lieu of cash and when this is deposited to my account, it appears as a cash entry. Should the patient default on his payments, which happens only occasionally, it is entered on the left-hand side of the ledger among the deductible items as a Bad Debt.

This brings us now to the question of what constitute deductible items. Obviously, food and clothing, except that sums expended for operating gowns and office jackets are not allowable deductions according to Uncle Sam. Neither is house rent, unless you have your office in your home, when a reasonable deduction may be made for it.

If, for instance, you have a 6-room house

(2) Interest on business indebtedness (notes on your automobile, new office equipment, or mortgage on your business property).

(3) Taxes. (All local taxes on all property. Also state income tax, if any, narcotic tax and payment for auto license on car used for professional calls.)

(4) Insurance on auto and on business property.

(5) Telephones (both office and house when used for professional calls).

(6) Electricity (office).

(7) Auto upkeep. (Garage rent paid to another, gasoline, oil, chains, etc. Also repairs, or this may be listed separately.)

(8) Auto depreciation. (About 25 to 30% per year. See text below.)

(9) Subscriptions to medical journals.

(10) Depreciation on books (10% per annum).

(11) Depreciation on office furniture and equipment (10% per annum).

(12) Replacements due to breakage which are not charged as depreciation.

(13) Laundry (sheets, towels, stationery, etc.).

(14) Salaries to employees. (Should any one of these exceed \$1500. per annum, separate form must be filled out.)

(15) Office supplies (stamps, stationery, etc.).

(16) Drugs and supplies.

(17) Charities. (Not to exceed 15% of net income.)

(18) Bad Debts. (See text.)

(19) Miscellaneous. (All minor charges not included above.)

Item 8 in the above list needs some further explanation. It is for depreciation on the automobile you use in making calls. Assuming you pay \$1000 for your car, use it for 2 years and trade it in for \$300, you may make a deduction of 25 to 30% of its value per annum.

Item 15, Schedule A, 1927

Depreciation, Obsolescence and Depletion

Office Building	\$21,000.00	\$630.00
Automobile	1,460.00	386.00
Library	850.00	85.00
Surgical Instruments	825.00	82.50
Office Furniture and Physiotherapy Equipment..	2,125.00	212.50
Linens	200.00	20.00
Total		\$1416.00

Item 16, Schedule A, 1927

Rent, Repairs and Other Expenses

Repairs (office bldg.)	\$325.50
Auto Repairs	35.00
Electricity	120.00
Telephones	184.57
Measured Water Service	12.00
Laundry	151.25
Medical Journals	40.00
Auto Upkeep	413.23
Auto Insurance	75.00
Insurance on Building	265.00
Total	\$1621.55

This may not be in strict accordance with all the rules laid down by the Internal Revenue Department, but I have done this for 7 years and the charge has been allowed. Ordinarily, only 10% of the valuation is charged off, but

in the case of a doctor who gives his car extraordinary usage, an exception can be made.

If you will explain the situation to your local collector and point out the logic of it to him, as I have done, it is more than likely he will be amenable.

Perhaps Item 15, Schedule A, for 1927, and the one following are the most puzzling. The first appears as: "Depreciation, Obsolescence and Depletion," which for your purposes you may consider one thing, namely, depreciation. Ten per cent is the usual deduction allowed under these heads. The second is for "Rent, Repairs and Other Expense."

For both of these items in Schedule A, I make out separate typewritten tables on separate sheets of paper, particularizing the charges that appear only in their totality on the income-tax sheet.

The other deductible items will find their places in the income-tax report proper, as you will note in looking over the blank sent out by the Government. Regarding the balance sheets shown in Chart II-A and II-B: They contain the totals expended each month for the various deductible items. You will see that they contain no reference to depreciation. This depreciation charge is figured only once a year, when the tax blank is being made ready. Interest charges, rent, taxes, etc., are listed as they are paid.

At the top of the page is the gross income, from which the sum total of expenditures for the month has been subtracted, leaving the net income for the month. In the itemized statement below, the article purchased is listed, together with its total cost for the month. Then, in the last column, marked "Balance Brought Forward" is the sum expended in the preceding months for the same article. Thus for Auto Upkeep in February, \$40 was spent. The balance brought forward from January for the same was \$55. The March balance sheet, in the column marked "Balance brought forward," contains the sum of these figures, \$95.

If you follow this system, there will be no mad scrambling for figures at the end of the year, and should the Internal Revenue collector ask for an accounting, as he some times does, there will be no embarrassment for you, since he can see plainly what your figures are. Further, I have found that keeping the duplicate sheets of the income-tax report from year to year, is also a great aid. It helps me visualize my report for the new year.

The figures may vary, though that is of small moment if you keep your ledger as I

have indicated, but the method of listing them remains identical, or nearly so, from year to year.

We all have our favorite method of keeping accounts, and habit is hard to change, but I have found this method so simple and so devoid of worry that any physician, however unskilled in bookkeeping, should find it easy to install.

Esthetics

MUSIC IN MEDICINE

(Abstract of an article, under the above title, in Jour. Michigan State Med. Society, May, 1928)

Music has come to be recognized as a distinct factor in any well organized recreational program. It frequently is the spark which kindles those higher impulses in men which, sympathetically fostered, develop into big, noble qualities.

No matter what the degree of a man's incapacity, he can enjoy music and derive benefit from it. In cases of nervous disorders brought about through horrors witnessed or from shell shock, it is frequently the *one medium* through which he can be reached.

Those of us who saw actual warfare will never forget the scenes in the little Red Cross huts by the railway stations and about the big hospital centers and camps in France. Who could doubt the effects of music when, for instance, some talented doughboy would sit down and play on the old rattling piano, "There Are Smiles That Make Me Happy", or "There's a Long, Long Trail", or "Tipperary", and witness the tired homesick boys become seemingly electrified, instantly join in the choruses, singing with a vim that was admirable, giving everybody present a new lease on life.

It arouses in us various emotions, but, according to Darwin, not the terrible ones of horror, terror or rage. We can see the importance of song in the treatment of battle-worn soldiers. These songs awaken the opposite emotions, such as love, mirth, courage and a "joie de vivre".

Darwin, who never rested until he could explain a thing, if it were explainable, could no more explain why musical tones in a certain order and rhythm afford pleasure than we can

account for the pleasantness of certain odors, colors and tastes.

The healthful influence of music physically is by the transmission of its influence from the *cerebrum through the sympathetic system which directs the various organs*. Thus, not only is music physic for the soul, dissipating mental depression, soothing psychic perturbations, but its influence may also enhance nutrition, further digestion and restore organic equilibrium. Indeed, the entire working of the human organism, physical and mental alike, may be lubricated by a stream of music, which art and science therefore should have a place in the medical armamentarium. It would, no doubt, be too much to expect every physician to be a performer on some instrument; yet illustrious physicians have been skilled executants. Strümpel, for example, was an excellent pianist; Billroth was a superb violinist, and all the better surgeon for his skill on that instrument. Richard Morrison, famous Boston surgeon of recent years, was a fine cellist; Richard Cabot, Professor in Medicine at Harvard Medical School, is an excellent violinist and chamber music performer. In any event, every physician could well be at least an appreciator of music and have some understanding of that art.

The famous German surgeon and musical philosopher, Theodore Billroth, to whom I have just referred, during the latter part of his life felt an ardent desire to arrange, classify and outline his own views concerning music. The result of his labor in this direction has been published posthumously in the book entitled, "Who Is Musical". Dr. Billroth goes into the very fundamentals of cause and effect in music from a physiologic and psychic standpoint. His conclusions are most interesting and I wish to quote only a few of them. He states: "Rhythmic movements are among the most important properties of our body and are necessary to life. Thus we have rhythmic movements of respiration, of the heart, and the rhythms which we are capable of imparting to our voluntary muscular movements. It is probable that all muscular movements of the body, conscious or unconscious, are brought about by a summation of numerous infinitesimal and imperceptible rhythms." Billroth asserts that a fundamental condition of music, namely, the more or less conscious ability to receive and appreciate rhythmic movements, must be innate in man and many

animals. This, like most rules, has its exceptions. He found, for instance, that about 2% of the soldiers in the Austrian and Hungarian armies never learn to march rhythmically. These men are not permitted to appear in parades or are transferred to cavalry regiments. Lacking, then, the appreciation of rhythm, which they never can learn, these men are absolutely unmusical, since the ability to apprehend the rhythmic organization of tones into melody is the fundamental and first condition for the comprehension of music.

Rhythms may be perceived simultaneously by 3 special senses. They may be heard, seen, and felt in the muscles. As the influence on consciousness may be exerted from 3 senses at the same time, it is evident that the major part of our nervous system is occupied in this process, a fact which readily explains the marked effect exerted upon the entire organism. Melody, on the other hand, is always more or less dependent upon conventionality, habit and fashion.

What has perpetuated the compositions of such masters as Handel, Bach, Marcello and Scarlatti is not their melodies, which are often strange and uninteresting, but their incisive energy and abundance of wonderful rhythms.

An ingenious American, Dr. Robert Schauffler, has suggested a veritable musical pharmacopeia. After close observation of the influence exercised by music on different kinds of pains he, with the aid of expert musicians, compiled what may be called, "A Musical Prescriber's Companion". For instance, against maniacal depression he recommends Wagner's Ride of the Valkyrie, and the prelude of Dvorak's Carnevale. For cases of nervous exhaustion following intense work, he prescribes the Moldava of Smetana and some songs by Greig. Against intense grief he suggests the execution of some studies of Chopin, Patetica of Beethoven and Dvorak's Concerti on the Cello. Some of Bach's works are indicated for cases of mental somnolence consequent on the abuse of alcohol. Furious mania is to be treated by the use of pieces with solemn movements as, for instance, The Pilgrim's Choir, in Tannhauser. Even in jealousy, there is a musical remedy in the Prelude of the Meistersingers. Dr. Schauffler is convinced that there is a great future for the Medical Pharmacopeia and that it will not be long before a new class of doctors comes into existence—medical musicians, who, after having examined the patient will, instead of a prescription, place in his hands a copy of a musical composition. An idealistic view, perhaps, but it represents a student's opinion.

Observations from the Lighthouse

ROENTGEN RAY DIAGNOSIS OF PREGNANCY

An aid to the diagnosis of pregnancy in its earliest stage will be welcomed by the physician. It is natural that such aid should have been sought through use of x-rays, and sufficient experimental work has now been done to justify a review and, possibly, the establishment of some conclusions regarding what we may expect from proper application of this new form of procedure. Such a careful consideration of the problem has been presented by M. Pierce Rucker and L. J. Whitehead (Jour. Michigan State Med. Soc., 27:559, Sept., 1928) of Richmond, Virginia, and we submit the following abstract of their paper:

The signs of early pregnancy fall into 2 categories: (1) Physical changes in the reproductive organs, (2) biochemical reactions. The hope that Roentgen rays would help in interpreting early physical changes, is only just now being realized. The demonstration of fetal bones by the aid of x-rays is not possible before the third or fourth month. Edling claims to have photographed fetal bones in utero early in the third month, but this has been questioned by Bartholomew and others. Leiser says that in the Dresden clinic no fetal bones could be demonstrated before the twelfth week. Between the fourteenth and twentieth weeks most cases were positive. Quite recently Jungmann describes a technic by which fetal bones may be shown in the eighth or ninth week, but his work has not been confirmed.

In 1924, Heuser published a paper on diagnosis with x-rays in the first months of pregnancy. He took great pains to rid the large bowel of fecal matter and gas, using first a purge (10 gr. of calomel) and then belladonna and bone charcoal. Better pictures of the uterus could be obtained by inflating the bladder with air. To make the uterine cavity more visible he says you could inject therein 1, 2 or 5 c.c. of lipiodol. In subsequent publications he says that lipiodol injections are very useful in the early diagnosis of pregnancy and that with a proper technic they are harmless.

Before adopting a procedure that is seemingly so radical one naturally would want to know (1) what effect lipiodol has upon the female genital tract, (2) the ill effects, if any, from its use in other gynecologic conditions, (3) the risk of up-setting pregnancy, (4) effect, if any, on the child.

While it is the general opinion that the injection of lipiodol into the uterus and tubes of the nonpregnant woman is safe, when it comes to injecting the pregnant uterus there is quite a difference of opinion. Siredey, in discussing Proust and Beclere's paper on the use of lipiodol in the diagnosis of uterine hemorrhages, says it is not to be thought of if there is a suspicion of pregnancy. Beclere agreed to this, and similar statements are made by Temesvary and Leiser. Dyroff says that the suspicion of pregnancy is perhaps a contraindication to the injection of iodized oil (he prefers "contrastol") into the uterus for diagnostic purposes. In 3 cases in which he wished to interrupt pregnancy he tried this diagnostic method. These cases went 8, 10

and 21 days without signs of aborting. He says if wider experience proves the innocuousness of this procedure the diagnosis of pregnancy should be possible as soon as there is an "ausbuckelung" of the desidua. Heuser says that he and his colleagues in Buenos Aires have never caused an abortion in this manner. In fact, he and Dr. Uslenghi and Dr. Martinez have tried to produce abortions in tuberculous patients by this method, but have been unsuccessful. Beclere in closing the discussion upon Proust and Beclere's paper, states that Juan Vanrell, of Barcelona, told him that he had made lipiodol injections in 2 cases of pregnancy and in one an abortion followed. Haselhorst reports obtaining a typical picture of pregnancy with iodipin in a 22-year-old III gavidia epileptic. Both tubes were patent. Following the injection there were high fever and pain in the lower part of the abdomen. The patient aborted on the fifth day.

Radiographic Technic

Patient is given morphin gr. 1/6 and hyoscin gr. 1/200 and is prepared as for delivery. (Shaved, soap and water scrub up, bichloride, mercurochrome 2% in the vagina.) She is placed on a Bucky diaphragm in the most advantageous position, depending on the position of the uterus. The cervix is exposed with a bivalve or Sim's speculum and a cannula is introduced under guidance of the eye. Lipiodol is slowly and gently injected with a Luer syringe until resistance is felt or the patient complains of cramps. The technic is 30 milli-amperes, 5 in. spark gap, with variation of time according to thickness of the patient. Exposures are made in at least 3 different positions, anteroposteriorly, Sim's position, and the ventral Trendelenburg's position. The first exposure is made after the solution has had time to pass out into the tubes; the second immediately afterward, usually in the Sim's position; a third made 5 to 10 minutes after patient has been allowed to sit in the erect posture.

Diagnosis

The diagnosis of pregnancy by hystero-graphy depends upon: (1) showing a relaxation of the uterine wall; (2) demonstration of the ovum; (3) closure of one tube; (4) failure of the uterus to expel the oil. Relaxation of the uterine wall is shown by a rounded or globular uterine cavity. Its size, of course, depends upon the duration of pregnancy. This flaccid condition of the uterus is quite characteristic of pregnancy, but it does not differentiate an intra-uterine from an extra-uterine pregnancy. On the other hand, a sharp angular shadow is a positive sign that there is no uterine pregnancy. All of our pregnancy cases have shown a rounded contour of the uterine cavity.

The situation of the ovum is shown by a filling defect and when it occurs in a rounded uterine cavity it is quite characteristic of pregnancy. Submucous fibroids occur in angular uterine cavities. One of our extra-uterine pregnancies showed many irregular filling defects due to blood clots. The filling defect caused by a post-abortual retained placenta is possibly the most confusing condition. Here, one has the pregnancy-relaxation and the single filling defect, but the filling defect is much smaller than that which occurs in any save the very early pregnancies.

The closure of one tube occurs in most preg-

nancies and is a useful confirmatory sign. It does not, however, have the diagnostic value that the first 2 signs have. All of our cases of pregnancy except No. 13 showed at least 1 tube closed.

Conclusion

(1) Hysterosalpingography offers a means of making an early diagnosis of pregnancy, especially valuable in such cases as tuberculosis in which a therapeutic abortion is indicated.

(2) The risk of its producing abortion requires further investigation. From our experience this risk does not appear to be great.

(3) It is a method of considerable value in making a negative diagnosis.

INFLUENCE OF ROENTGENOLOGY ON THE PRACTICE OF SURGERY

A general review of the effect of roentgenology upon surgical practice during the last quarter of a century is offered by James T. Case (Jour. Michigan State Med. Soc., 27:569, Sept., 1928) of Battle Creek Sanitarium, and we quote some of the most interesting passages thereof:

It is nearly impossible for us of the present younger generation to realize the wonderful assistance rendered in the localization and extraction of foreign bodies—the first and most obvious help rendered by Roentgen's discovery; for even those surgeons still active who began their work before Roentgen's discovery have become so accustomed to our present luxuries that their memories of the distressing problems of former days have been dimmed. The gastro-intestinal tract was, in a 1200 page surgical textbook of 1903, dismissed with 36 words relating to the fact that the outlines of the stomach could be demonstrated after gaseous distention or the administration of some bismuth subnitrates.

In fractures and dislocations, not only is it almost malpractice today to attempt a complete diagnosis without the radiogram, but in therapy its use is indispensable in checking the correctness of the replacement. No modern surgical institution for the treatment of bone and joint injuries can be called complete which does not include provisions for fluoroscopic control during surgical manipulations, and frequent check at the bedside by portable apparatus. In the field of gastro-enterology and urology, the unfolding of diagnostic radiologic possibilities has taken place mainly through the placing of opaque media within the viscera under study.

Another epoch in radiologic diagnosis was dependent upon the fact that air or gas is easily discerned with Roentgen rays. At first, one used the air or gas naturally present, thus studying the trachea and the lungs, gas abscess and gangrene, gas or air collections in the larger body cavities, as the sinuses, spontaneous pneumo-abdomen; but soon advantage was taken of the introduction of air or gas to produce artificial pneumothorax, artificial pneumoperitoneum, ventriculography, cephalography and myelography, and even occasionally the injection of air or gas into articulations, especially the knee joint, to demonstrate otherwise invisible lesions, such as loose cartilages. Certain dangers attend the latter procedure and it is nowadays seldom resorted to. The detection of spontaneous gas collections has led to some of the most spectacular

triumphs in radiology, such as the diagnosis of subphrenic gas abscess, intra-hepatic and sub-hepatic abscess, pancreatic abscess, chronic ileus, postoperative ileus, gas bacillus infection in traumatic wounds, and the recognition of perforation of abdominal viscera by detecting a small intraperitoneal collection of gas.

Still another phase of radiologic diagnosis was initiated by the introduction of iodoform, and later bismuth paste for the visualization of sinuses and fistulas. From the relatively limited uses of the earlier opaque pastes grew the present extensive employment of iodized oil in pulmonary, gynecologic and neurologic diagnosis, permitting complete opaque visualization of the bronchial tree and the detection of bronchiectatic cavities, lung abscess, bronchopleural fistulas, pulmonary and pleural tumors; improved accuracy of gynecologic diagnosis, especially differential diagnosis; and in neurology the exact localization of spinal cord tumors, and their differentiation from meningitic processes. Iodized oil instillations have also served a useful purpose in extending the field of rhinologic diagnosis, especially in the identification of thickened membranes, polyps and other tumors of the nasal accessory sinuses.

It is now possible to differentiate successfully between diverticulum of the pharynx and esophagus, esophageal malignant disease and cardiospasm. Without the assistance of radiology, it was formerly only very rarely and with greatest difficulty that hernia of the diaphragm was recognized, whereas today, hernia and eventration are differentiated, and it has become almost a commonplace matter, thanks to x-ray guidance, to intubate the esophagus, the stomach and duodenum and even the small bowel.

In gastric disease, Dr. Richard Cabot has declared that the Roentgen findings are worth more than all the other laboratory diagnostic means combined. Moynihan declares "it is hardly too much to say that we owe almost everything" in the diagnosis of gastric disease to radiology; and he does not doubt that "more errors have been made in the diagnosis of gastric ulcer than of any other disorder. Its symptoms are mimicked with so much accuracy by other diseases that it is not only the unwary who are deceived. Radiology has put most of this right, and has explained the cause of the so remarkable plagiarism by those other diseases which arouse gastric symptoms". And, further, it has been not only diagnostic errors, but faulty therapeutics, which have been largely corrected through the aid rendered by x-ray studies and control. It is not too much to declare that in no case may a diagnosis of gastric ulcer be based upon clinical evidence alone. Radiologic confirmation must be secured before one is warranted in proceeding with treatment, either medical or surgical.

It should be recalled, however, that after all, the radiologic aid is but one, though a very important one, of the clinical resources available to the surgeon. Particularly in the field of negative findings should the radiologist's opinion not always be considered as authoritative. His failure to find positive signs of disease should not lead us to reject at once and *in toto* the evidence furnished by other approved methods. Particularly in disease of the gall-bladder the surgeon must be willing to act upon the conviction arrived at by other means in many cases where the radiologist fails to furnish confirmation rather than be "lulled into contentment and a

dangerous inactivity, only to be roused by a very formidable catastrophe". Again quoting Moynihan, "If the careful clinician has made a diagnosis of cholecystitis or cholelithiasis, a report from the radiologist that gives it no countenance should be disregarded. And so it is with suspected malignant conditions of the large intestine. Though a radiologic examination often affords the greatest help when confirmed by the clinical history, and with the daily search for occult blood, the earliest and most certain diagnosis of these diseases, after all, is made when the barrier of the abdominal wall is lifted away."

Permit me to devote a few words to the value of the x-ray examination in the control of post-operative treatment and the recognition of post-operative complications. For this a bedside portable x-ray equipment is a necessity in every well equipped hospital. Subphrenic abscess, postoperative ileus, pulmonary complications, particularly the differentiation of subdiaphragmatic conditions from pleural and lung complications, the control of the position of drainage tubes, are among some of the less usually recognized opportunities for bedside x-ray study.

As for therapy, x-ray treatment is rated as one of the recognized surgical means in the management of malignant disease, though with its limitations. The radiotherapy department constitutes a haven of last resort for many surgical derelicts. True, in the treatment of malignant disease, too often the radiologist has seen the patient only in the extremity of his tragical experience, and little can be done.

In surgery there is a large field of usefulness for radiotherapy in benign lesions; inflammations and suppurations, such as cellulitis, carbuncle, erysipelas, actinomycosis, parotid fistula, certain of the arthritides, bone and joint tuberculosis, tuberculous adenitis, peritoneal, intestinal and urogenital tuberculosis, keloids, and in some cases of prostatic hypertrophy.

Gynecologic affections are in part amenable to radiotherapeutic management: many types of uterine fibroids, amenorrhea, oligomenorrhea, dysmenorrhea, metro- and menorrhagia, especially the excessive bleeding which so often occurs near the menopause. Many radiologists, especially in Europe, also recommend the employment of radiation in certain fields which I have not been able to accept, namely, to produce therapeutic abortion, in the treatment even of sterility, or, on the other hand, for the therapeutic production of sterility.

ROENTGENOLOGIC POETRY

In the Saturday Review of Literature, October 13, 1928, among the responses to a prize contest for the wittiest verses "on receiving an x-ray photograph of one's self" we find the following:

This was a very popular and fruitful competition. In spite of several lugubrious attempts to unbar the charnel house door the general tone of the entries was more cheerful than gloomy. R. B. Roth called the prevailing tune with his distich—

I looked at it and laughed at it, but
it sort of hurt my pride
To think that one the likes of me
should look like that inside.

—a tune elaborated in considerable detail by the high-spirited Dalnar Devening, thus—

Into my hands a thing that chills
So much does it disclose.
What are those records of my ills?
What viscera are those?

Is that what eats and pays the rent?
Is that my heart and brain?
Oh, room to give my laughter vent
That ever I was vain!

Of the very few competitors who found reason to rejoice in their x-ray photographs both Richard Denham and Heloise wrote highly commendable poems.

At last, at last, a portrait
I feel has done me justice,
As I shall look past bell and book
Where neither moth nor rust is!
My occiput, one more trait
No snapshot yet has flattered,
Now flaunts its shape from brow to nape
Where once stray locks lay scattered.
Though sinus imperfection
To eyes initiated
May mar my skull, still beautiful
By you I shall be rated.
For your profound affection
Which shines with more than sex ray
Through surface traits, irradiates
Far deeper than the x-ray.

Heloise.

Communications

AWAKENING TO THE TRUTH

In our "Casual Glances at Medical Life in Paris", published in the November Journal, we noted a news item appearing in a Parisian daily but emanating from London, announcing a change of heart on the part of some members of the Christian Science Church. It is our pleasure now to present a more complete exposition of that news item and all that it portends. That you may fully understand what has happened—and it is, indeed, a very important happening—we reproduce herewith a letter and a 4-page leaflet, in full, recently received from a branch of the Christian Science organization whose members have, apparently, begun to see the "truth" in its stern aspect.

THE CHRISTIAN SCIENCE WATCHMAN

20 Jackson Place N. W.
Washington, D. C.

Office of the Editor October 18, 1928

Dr. Henry O. Reik, Editor
Journal of the Medical Society of New Jersey
14 South Day Street
Orange, New Jersey

Dear Doctor Reik:

The tragedies that have been permitted in the name of Christian Science by its overzealous devotees have largely justified the widespread prejudice against it. The Christian Science Parent Church, the independent minority movement in Christian Science, is endeavoring to bring a new spirit of sanity and common sense into the prac-

tice of mental healing. It recognizes the unselfish, humanitarian labors of the medical profession in alleviating human suffering. It likewise recognizes the vital function of spiritual forces in relation to health. It is convinced that there exists a basis of coöperation on which medicine and religion may thrive together for the advancement of world health.

Since Mrs. Eddy's death, Christian Science practice has very largely become a commercialized faith-cure. The record of disease and death among Christian Scientists during the last few years is appalling. Because of a superstition that the use of a drug is an evil and the employment of medical aid tantamount to a confession that Christian Science has failed, the majority of the adherents of that faith turn to medical assistance only as a last resort, usually secretly and with the depressing conviction that they are committing a positive sin. Such an attitude tends to nullify the work of the physician and deplete the patient's mental capacity for recuperation. Frequently the doctor is called only when death is considered imminent, and to prevent, if possible, the embarrassment of an inquest.

These conditions have arisen from a misconception of Christian Science in its larger application. In order to prove to an incredulous world that the body can be healed by mind, drugs were discarded during the early stages of the movement. Nevertheless, it is a recognized fact in Christian Science that a drug may be the medium through which the common faith and hope of the majority of mankind expresses itself. In the personal experience of Mrs. Eddy there came a time when neither her own nor her followers' unaided faith was sufficient to relieve her of serious suffering. Understanding the power of the faith of the majority of mankind in medical science she decided to utilize it, and gratefully availed herself of the services of reputable physicians on various occasions.

In so doing, she was consistent with her own teaching on the relation of a minority's faith in mind-power to a majority's faith in material means. She was far in advance of her followers' practical application of Mind-Science. Had her example been intelligently followed by her students, Christian Science practice would today hold a higher place in the general estimation of the world.

The Christian Science Parent Church was organized a few years ago under the leadership of Mrs. Annie C. Bill. It has developed branches throughout Great Britain, America, Australia, and elsewhere. Its members have been recruited almost entirely from those who have resigned from the original Christian Science organization after they became convinced that the trend of thought within that body precluded further advancement of Mind-Science.

This organization maintains that the work of the Christian Scientist is limited to the teaching of spiritual truth, and to removing fear and other unhealthful moral conditions. Its members are forbidden by their Church By-Laws to meddle in any way with medical or surgical practice, but must leave such work to those who are qualified and legally authorized for that responsibility. Neither shall a practitioner of this Church render his services unless both patient and attending physician request his aid.

Spiritual healing has a definite place in therapeutic practice. Therefore, in order that it may be utilized under such conditions as will keep it

within its proper field and insure the maximum results, we bespeak the intelligent coöperation of the medical fraternity.

Yours very truly,

A. M. Vickery,
Editor.

A GHASTLY RECORD

(The statistics herein contained have been compiled mostly from the official records of vital statistics of the town of Brookline. They can be verified at the Brookline Town Hall or from the records of the Medical Examiner of that district.)

Several years ago, in the town of Brookline, Massachusetts, U. S. A., there was dedicated an institution called The Christian Science Benevolent Association Sanatorium. Its buildings, providing accommodation for something over 100 inmates, cost over \$1,000,000. They are considered among the finest examples of Tudor architecture in New England. It was announced in the printed matter distributed at the time, that this institution was not to be like a hospital, or the usual kind of sanatorium, but just "a place where expectancy prevails and hope is enthroned". The new institution was declared to be "not an almshouse", but a place where "practical benevolence" was to be dispensed to the extent of its capacity at \$24 per week "and upward". This institution, built since Mrs. Eddy's decease in 1910, is ostensibly owned by what is known as The Christian Science Benevolent Association Corporation, but this is really but another name for the Directors of The "Mother Church" in Boston.

Notwithstanding that it is described as a place "where expectancy prevails and hope is enthroned," its death record is appalling. For some reason yet to be explained, death certificates were filed at Brookline Town Hall in a large majority of cases in violation of the rule requiring that the full name of an institution be recorded in a certificate when death has occurred in any *institution*. Only the street number on Boylston Street was given in almost all of these cases, just as the record would have been if decease had occurred in a private residence. Unless an inquirer is familiar enough with the street numbers and locations to identify scores of these certificates as recording deaths at the Christian Science "Sanatorium," it would appear that a death at that institution has been an exceedingly rare event. Thus has the official public death record concealed, rather than revealed, the facts.

Among the persons who have passed away at the Sanatorium during the first 5 years of its existence are the following. This list is as complete as it has been possible to secure at this time, and includes some of the most prominent Christian Scientists in America:

Sue Rockel
Mable R. Steere
Mary D. St. John
John A. Ring
William A. Judson
Alice Seward Brown
Augusta F. True
Annie L. Harper
Lola W. Choate
Marg't W. Carmichael
Lydia Clement
Estella Rose
Julia S. Bartlett
Alice M. Cutler

George O. Pelgram
Alda A. Vandergrift
Elizabeth M. McClure
Annie R. Hulsbush
Mary G. Chadwick
Elizabeth G. Bacon
Orrin H. Wilkins
Mary C. Hire
William A. Akin
Mary C. Robinson
Jessie F. Grant
Sorrell Lamb
Martha I. Lambert
Adolph F. Youngston

Elizabeth W. McMillan
Lillian M. McAdow
Laura B. Jennings
Mrs. Anna W. Nichols
Mrs. Vinnie P. Fox
Wilfred E. Cawker
Mrs. Hattie B. Crouser
Miss Christine Johnson
Martin Francis Tobey
Walter E. Mitchell
Lilly Emma Fales
Susan M. Bailey
Adelaide E. Lewis
Elizabeth A. Bacon
Flora S. Mackinley
Stella V. Pickering
Clarabelle Davidson
Mary E. LeClair
Warren O. Wright
Lelia Holt Adams
Clarence T. McFarland
Elizabeth S. Johnson
Gertrude C. Smith
Maria Ayer
Lynda E. Brown
Albert Manetey
Mrs. Olive M. Cary
Mrs. Bertha J. Ames
Frank S. Miller
Mrs. Kathryn N. Stall
Lorenzo B. Newell
Miss Louise Kellogg
Agnes Gertrude Upham
Florence M. Perry
Choloe Carr
Lewis S. Adelson
James D. Sherwood
Ida M. Griffin
Laura S. Victorson
Hanson W. Wheeler
Susan Parker Perkins
Harriet M. Sawyer
William Chase
Louisa C. Burton
Mary E. Marble
Helen A. Barnum
James J. Riegel
Fred H. Jerome
Esther Elizabeth Higbee
Adelaide I. Smart
Lenore Rebecca Lusty
Jennie C. Holmgren
Mary N. Jones
Mary C. Bennett
Milton A. Becker
Milton M. Gilmore
Elise D. Strobel
Lucy C. Carpenter
Otto Presser
James J. Rome
Mary Alice Trumbull
Lillian R. Chase
Carrie L. Lindley

Charles F. Whitmarsh
Bertha L. Simpson
Susan J. Sleeth
Mamie E. Stein
Augusta S. Stitch
Maud B. Whitehurst
Robert Bruce Warren
Ella F. Ellison
Edwin N. Lublin
Eva Krummie
Ida V. Bishop
John C. Slayton
Mary C. Hiscock
Luella C. Hill
Zella M. Rothrock
Elizabeth Mack
Kathryn Anne Tate
Lillian C. Hanson
Cora E. Stough
Adah E. Binning
Georgiana W. Deming
Edwin F. Needham
Annie Laurie White
Irene M. Wagner
Albert E. Miller
J. Lee Robinson
Alice E. Tower
Elizabeth H. Burgess
Willis J. Marsh
Lucy A. Cummings
Lillian W. Dodd
Phoebe L. Haines
Minnie R. Miller
Augusta W. Weber
Honora M. Circle
Harriet W. Jones
Pearl E. McCormic
Lyman H. Howe
Luella M. Edwards
Susan R. K. Hoyt
Louise B. Warner
Corrine C. Donahue
Louise M. S. Bergner
Leo Wellhouse
Florence M. True
Adelaide C. Patten
Mary J. Cutting
Annie Rodda
Grace D. Parsons
Cora Elenora Thomas
Ernest A. Lothrop
Marie Chapman
Mary M. Blake
Alice Sinton
Gertrude D. Close
Emeline E. Durgin
Annie Catherine Wing
Margaret B. Kleinfelder
Ida E. Smith
Lucile Halston
Harry W. Saunders
Alice C. Churchill
Anna K. Spencer

In addition to the above, the following is a list of persons who died in the town of Brookline under Christian Science treatment during the same period, a list which, though not complete, includes the "overflow" from the Benevolent Association Sanatorium which has gone to so-called private Christian Science *sanatoriums* in Brookline. These are all conducted by "loyal" church members under the disciplinary control of the Church Directors. Among these places were "The Rainbow" at 162 Mason Terrace, "The Home" at 22 Beals Street, and "The Retreat",

at 30 Naples Road. This list includes Christian Scientists who came to Brookline from many different states and from Canada and England, in order to be near the official central spot "where expectancy prevails and hope is enthroned." Many others, representing a large majority of sick Christian Scientists, were sent to private "Christian Science sanatoriums" in Massachusetts outside of Brookline and also outside the State of Massachusetts. These private so-called Christian Science "sanatoriums" have sprung up all over the world, during the past few years. They are patronized by Christian Science church officials and officially licensed Christian Science practitioners, for persons who are placed under their "treatment". It has been stated officially in the House of Commons that there are between 30 and 40 of these sanatoriums in England and Wales.

Cara Macy Foss
Annie R. Crafts
Frances Storm Mattox
Carrie Evelene Cady
Emily E. Pentecost
Caroline R. Holt
Rose A. Beebe
Thomas Radden, Jr.
Harriett F. Jackson
Mary A. Rhodes
Harriet Howe Stacy
Marion W. Lallor
Laura Lathrop
Earl Russell Fretz
Mary B. Randall
Clarence A. Dow
Adelaide Lucy Jenney
Arthur E. Blanchard
Virginia M. Gay
Elizabeth C. McCaulley
Elizabeth A. Moore
Judith Roselth Knapp

Francis B. Corcoran
Elizabeth C. Magee
Carrie I. Rowell
Juline E. Rothwell
Charlotte Carey
Levi L. Wilcutt
Anna E. Baker
Eleanor Ross
Lydia A. Wood
Ella S. Rathvon
Herbert M. Cooper
Dorothy T. Howard
Herbert L. Dunbar
Emma Bird Wing
Ralph B. Corby
Frances L. Dewey
Joanna Shadie
Charles F. Chase
Emma F. Steele
Hilma M. Zellerstrand
Kenneth Wing
Lillia M. Bearns
Elizabeth F. Adams

Among the tragedies which have occurred at the Brookline Christian Science Sanatorium was the decease, under unusual circumstances, of the distinguished architect who constructed the Sanatorium buildings. "Patients" have been found dead in bed, or dead in their chairs, under conditions as gruesome as could be imagined. One tragedy related to the decease of a nationally known motion picture producer, who was dead while his family in a Boston hotel were rejoicing over his healing, as reported from the Sanatorium.

There is a growing dissatisfaction with this "Sanatorium" among many Christian Scientists who declare that it is a *complete inversion of Christian Science*. It is pointed out that collecting together a large number of persons suffering from practically all known diseases, many of them being of the most distressing varieties, is clearly opposed to Christian Science practice and violates a fundamental teaching of Mrs. Eddy, that sick persons should be kept in a healthy mental atmosphere not filled with haunting outlines of disease.

Brookline is the home of 3 medical hospitals of national reputation—the Corey Hill Hospital, the Brookline General Hospital, and the Brooks Hospital. In points of deaths, during the 5-year period since the Christian Science Benevolent Association Sanatorium was established, and which the above figures cover, almost as many persons died in the Christian Science Benevolent

Sanatorium as in all 3 of these famous medical hospitals, together, and 18 more Christian Scientists died in Brookline during this period than in all 3 of them.

If the total deaths in Brookline under Christian Science treatment during the period, as compared with those in private medical hospitals in that town for the same time, are compared with the small percentage of Christian Scientists in Brookline to the total population of that town, the resulting figures are staggering, as they have been declared to be during the past few years in many other localities.

(The facts above stated were widely published in America many months ago. They have never been officially or publicly denied.)

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Lay Mirror Reflections

MATERNAL MORTALITY STATUS REPROACH TO THIS NATION

(Newark Evening News, October 18, 1928)

Something very little short of an indictment of American medicine is implicit in the report made to the American Public Health Association at Chicago by a committee headed by Dr. Julius Levy, of this city. This country makes the poorest showing, barring only Chile, Dr. Levy reports, in maternity deaths; and the now almost general practice of seeking hospital care during *accouchement* has not materially mended matters.

Critical observations, which would shed light upon the real or apparent causes of this poor showing, are, unhappily, not included in the report. Probably the guiding reason for this omission is that the causes are not readily generalized, a deduction fortified by the committee's request that the subject be given general study by the association with a view to discussion at future meetings.

The proud record of American medicine in conquering general disease and specific epidemic infections, however, throws into bold and unpleasant relief this singular lack of advance among us in safeguarding life in the most appealing of human experiences. That among every 1000 births in this country 6.7 mothers relinquish their lives, whereas in Holland, which leads the list of nations in this field, the deaths of mothers number only 2.4 per 1000, is clearly suggestive of the suspicion that we have neglected maternity in this respect, while pursuing with signal success progress in other lines of medical advance.

Aside from mortality among infants immediately after birth, there has been excellent progress in curtailing infant mortality. Why, then, has the United States stood still, despite its rapidly advancing multiplication of hospital facilities, its elimination of questionable medical schools and its better dissemination of health in-

formation among the people, in making reproduction of the species safe for those who bear the burden thereof?

WHAT OTHERS THINK

(Newark Evening News, October 23, 1928)

Defends Maternal Care

To the Editor of the News:

Sir—To those not familiar with maternal welfare work, statistics given in the News a few days ago were somewhat startling. These statistics, while true, are misleading.

A maternal death is ordinarily thought to deal with childbirth, but these statistics cover all deaths during pregnancy, including abortions—criminal and otherwise. As this country keeps very accurate account of this class of cases, the total mortality is naturally high. This must not be construed to mean that a woman cannot have a child as safely in this country as anywhere else.

In my opinion, the United States is second to none in the care of its maternity cases. Where can you find so much effort spent on maternal welfare, with its systematic prenatal care for every one, rich and poor? Where are there any better-equipped maternity hospitals than in this country? The surgeons at any general hospital will tell you how the number of secondary operations, performed for conditions resulting from childbirth, has been reduced in the past 25 years. The maternity hospital is largely responsible for this improvement, for there immediate repair can be given to injuries and a more perfect result obtained than in the home.

The standard of work in maternity cases is steadily being raised, and it is misleading to publish statistics implying anything to the contrary.

East Orange.

A. W. Bingham, M.D.

LIVING MONUMENT TO A DEAD CHILD

(Newark Evening News, October 27, 1928)

"Chemistry in Medicine", published under the auspices of The Chemical Foundation of New York, is a book every practicing physician will find valuable for his working library. Remarkable in itself as a collection of papers on related subjects which deal with the prevention and cure of disease, it is even more notable as being a memorial of a "beloved child," Patricia, daughter of Mr. and Mrs. Francis P. Garvan of New York. Mr. Garvan is president of The Chemical Foundation.

Little Patricia died some years ago of rheumatic fever following grip, which some of the greatest physicians of the country were unable to check. The conviction came to her parents that if medicine had failed it was because of gaps in knowledge of ultimate causes of disease and of scientific methods to combat them. One of the most promising methods of insuring progress in attacking unsolved problems might be found in the coöperation of medicine and chemistry. So the present collection of scientific treatises was launched, the contributors being among the most eminent of the nation's men of science. It may properly be noted that each contributor asked no honorarium, and that the book itself is sold at actual cost of production.

It is dedicated "To the welfare of your children and your children's children."

The editor in chief is Dr. Julius Stieglitz and the associate editors are Dr. Reid Hunt, Dr. Frank R. Lillie, Dr. Anton J. Carlson, Dr. Lafayette B. Mendel and Dr. H. Gideon Wells. The individual contributions number 40, each devoted to some particular phase of coöperation by chemistry and medicine.

In Lighter Vein

And When Is That?

We've always wondered who wrote those little helps for mothers that you see in the papers every once in a while. We still don't know, but we'll bet the writer isn't a mother. Pipe this one:

"Have some hooks placed low enough in the bathroom so that the small boy may hang his coat there when he washes his hands and face."
—Manhattan (Kansas) Mercury.

Politts

Recently our little nephew, aged 8 years, came running into the house and related the following tale about his playmate:

"Mother, Billy said Al Smith was going to be our next president and I said, 'No, sir, Hoover is going to be our next president.' Billy said it wasn't so, and I pushed him a little and—my tooth is in my pocket."
—Milwaukee Sentinel.

The Effects of the Party

Wife: Where were you all last night?

Husband: I was sitting up with a sick friend—and, if you want to know the whole truth, I was as sick as he was.

Says Edward Schill, of East Orange, "If you teach a boy to blow a saxophone, he'll never blow a safe." Even so, it's not a thing to decide hastily.—The New Yorker.

Sinner's Alibi

Charlie Herpel told this one on his brother Frank:

Mrs. Herpel (to Frank): "There were 3 pieces of cake in the pantry, and now there is only 1. How did that happen?"

Frank: "Well, it was so dark in there I didn't see the other piece."
—Southern Maryland Times.

The Art of Being Ill

When an Alva woman becomes ill, she puts on a newly ironed nightgown and fixes up her hair, but when a man takes down, he lets himself go to seed and looks like something the cats dragged in.—Alva (Okla.) Review-Courier.

Tonsils or Haircut?

Irma Stickler had a tonsorial operation Tuesday by Dr. Walker, of North Platte.—North Platte (Neb.) paper.

Current Events

MINUTES OF WELFARE COMMITTEE MEETING

Pursuant to a call issued under instructions of the President of the Medical Society of New Jersey, Dr. Ephraim R. Mulford, the Welfare Committee met at the Stacy-Trent Hotel, Trenton, October 28, 1928, at 3 p. m.

Dr. Mulford not having arrived, the meeting was called to order by Ex-President Walt P. Conaway, who announced that the newly appointed committee would proceed first to organization and requested the choice of a chairman.

Dr. Andrew F. McBride was unanimously elected chairman of the committee and assumed the chair with an expression of appreciation of the honor conferred in continuing to reelect him to this office.

Roll call was responded to by the following members: Barkhorn, Bloom, Clayton, A. H. Coleman, J. G. Coleman, Conaway, Cosgrove, Costill, Davis, Disbrow, Donohoe, Ely, Emerson, Green, Guion, John F. Hagerty, D. L. Haggerty, Hunter, Kelley, Larkey, Lathrope, Lippincott, Londrigan, McBride, McMahan, Mulford, Remer, Ryan, Schaufler, Schureman, Sewall, Sherman and Tracy; only 4 members of the committee absent, and 2 of these, Morrison and Way, had sent explanations of their inability to attend.

The Secretary presented a short written report as follows:

REPORT OF EXECUTIVE SECRETARY

October 28, 1928

Mr. Chairman:

The Executive Secretary has very little to report to this committee at the present moment. The routine work of his office has proceeded smoothly during the summer months. The State Society Journal progresses satisfactorily, we believe. The Transactions of the Annual Convention, held in Atlantic City in June, were published, as has been customary in recent years, as a supplement to the August Journal. We are developing some new features in the Journal but they are described in the November issue which will be in your hands within a few days.

Mrs. Taneyhill, having succeeded to the management of the general educational program, is endeavoring to secure engagements to address women's clubs, and has already delivered several lectures this month. She is appealing to the women's auxiliaries to procure such engagements but she will appreciate it if members of this committee will also help in that matter. In her report to the House of Delegates, she mentioned the possibility of delivering one or more lectures on the lives and works of some of the great benefactors of mankind. During the summer, she prepared the first of these lectures, setting forth the romance of Pasteur's labors in a manner that should be attractive to the layman. She has had lantern slides prepared to illustrate that lecture and is now ready to book that specific lecture in relation to our Antidiphtheria Campaign; in fact, she delivered it for the first time in Burlington County on October 26. Expenses attending preparation of this lecture amount to approximately \$50 and we ask your approval to the proposition that this be paid from the Welfare Committee appropriation.

With reference to resuming radio broadcasting in connection with our educational program, it seemed unwise to start anything this year until after the Presidential election. We are negotiating with WPG for a resumption of broadcasting from that station, and hope to make arrangements to start a new series of health talks in the near future. We would again ask if any member of this committee can assist us to procure the privilege of broadcasting from Station WOR, at Newark.

In a letter recently received from the American Medical Association, signed by Dr. Dodson, we are requested to resubmit a former proposition, namely, that the Medical Society of New Jersey shall purchase a sufficient number of copies of the "Manual on Periodic Health Examinations" to supply each member of the Society with a copy gratis. The price quoted is \$80 per thousand; which would mean that compliance with this request would call for an appropriation of approximately \$250. You will remember that the Welfare Committee decided 3 years ago that it was inadvisable to distribute the Manual in this manner; holding that if our members are interested in this matter they will purchase the Manual and examination blanks, as we have offered them at cost price. Dr. Dodson believes that our efforts to interest the profession in this question would have met with greater success if we had supplied each member freely with a copy of the Manual, and states that "about 35 state medical associations have supplied each of their members with a copy of the Manual". If our own observation is correct, success of the movement has been no greater in those states where free distribution of the Manual is made than it has been in New Jersey. However, at his request, we resubmit the question for your consideration.

Several matters pertaining to the Welfare Committee's program of work for the coming year have been brought to our attention but they will doubtless be presented today by their respective sponsors.

Respectfully submitted,

Henry O. Reik, M.D.,
Executive Secretary.

Upon motion of Dr. Costill, duly seconded, the report was received favorably and the recommendations adopted.

At the request of the chairman, the following items in the report were considered and voted upon separately:

(1) The Secretary was authorized to expend the sum of \$50, or so much thereof as might be necessary, from the Welfare Committee's allowance, to cover the cost of the Pasteur lecture as prepared by Mrs. Taneyhill.

(2) Approval was given to the proposition to broadcast health talks from Station WOR, as well as from Station WPG, if permission to do so could be obtained; and members of the committee were requested to use their personal influence for development of this project.

(3) The request from the American Medical Association that the State Society purchase a sufficient number of copies of the "Manual on Periodic Health Examinations" to distribute without cost among our members, was not approved.

Dr. Schaufler requested information concerning the cost to women's clubs and other lay or-

ganizations when arrangements are made for our educational secretary to address such gatherings.

The Executive Secretary explained that no cost to these clubs attaches to the engagement—the State Medical Society paying all the expenses of its lecturers—save that the local club shall provide place of meeting and all local arrangements pertaining thereto.

Dr. Londrigan, chairman of the committee appointed last year to consider legislation affecting the legal rights of hospitals, physicians and nurses in connection with accident cases, especially as regards collection of accounts for services rendered, reported that his committee desired to secure the adoption of a law in New Jersey similar to that enacted in Nebraska regarding this matter. He suggested that the Nebraska law be printed in the Journal, for the edification of all the members of the State Medical Society, and that the New Jersey State Hospital Association be requested to sponsor the introduction of a similar bill at the next session of the state legislature.

Dr. McBride explained that while the hospitals, physicians and nurses often receive no compensation for services rendered in emergency cases, the attorney who looks after the damage claims of the patient receives his pay by virtue of the fact that the state law provides that his payment shall be a lien upon any damages awarded the injured party. The Nebraska law applies that same policy to protect the interests of the institution or individual who took care of the patient.

Dr. Hunter asked if it is a fact that the legal fraternity has such protection at present in the New Jersey statutes.

Dr. McBride answered "yes".

Dr. Lathrope asked if it would not be well to approach the State Hospital Association at once and find out whether that organization will take up this matter in our behalf.

Dr. Guion replied that the State Hospital Association's Executive Committee would be holding a meeting within a week, he thought, at Jersey City, at 11 a. m., October 31, and suggested that Dr. Morrow, who is now President of that Association and also a member of this Welfare Committee, should be apprised of our wishes.

Dr. Schauffler moved that Dr. Londrigan be requested to attend that meeting and that he be authorized to present the request under consideration.

Dr. Ely moved that the Executive Secretary write a letter to the Hospital Association, establishing Dr. Londrigan's authority to act in behalf of the Welfare Committee.

Both motions were unanimously adopted.

Dr. George H. Lathrope, Chairman of the Committee on Expert Testimony, presented the following report:

REPORT OF THE COMMITTEE ON EXPERT TESTIMONY

To the Chairman of the Welfare Committee of the New Jersey State Medical Society.

Mr. Chairman:

Your Committee on Expert Testimony appointed a year ago begs to submit the following report.

The months immediately following the appointment of this committee were spent in gathering information: (1) As to the status of opinion evidence legislation in various states of the union; (2) as to the attitude of various indi-

viduals in this state toward the need for change in the New Jersey law; and (3) as to the attitude of, and likelihood for cooperation from, the New Jersey Bar Association.

The appointment by you of this committee assumes at once the desire on the part of the medical profession in this state to work some change in a system which is at present notoriously subject to abuse, and which has brought both the medical and legal profession a distinct measure of public contempt.

I. THE PRESENT STATUS OF LEGISLATION ENACTED OR PROPOSED IN VARIOUS STATES

Four states so far have put laws on their statute books, all of which have the same central idea, viz: they give the court authority, whenever occasion for expert or opinion testimony arises, to appoint experts *in addition* to those brought in by either litigant. The purpose of this is that experts, being appointed by the court, shall thus insure opinion evidence which is known by all concerned to be free from bias; as they are employed and their remuneration is set by the court.

The result has been, in 1 state at least (California), that litigants do not avail themselves of their right to bring in their own expert witnesses, but rely on the court appointed experts. This result is obviously a step toward simplification.

Wisconsin¹ (1921), Rhode Island² (1923), and California³ (1925), all have such laws on their statute books and in operation. Michigan⁴ (1905) adopted such a law; but her Supreme Court declared it unconstitutional⁵ on the ground that the appointment of court experts gave them a certificate of credibility from the court which depreciated the value of the litigants' expert testimony and thus constituted an unwarranted interference with the rights of the litigants.

This opinion of the Michigan Supreme Court has been subjected to severe criticism by various legal gatherings, notably that of the Cleveland Bar Association (1927)⁶.

A strong movement is now afoot in Ohio to pass legislation of this type. In Massachusetts such a bill was offered and defeated.

The standing committee on Jurisprudence and Law Reform of the American Bar Association composed of 14 members, of which Mr. Henry W. Taft of New York was Chairman, submitted a report⁷ on expert testimony in July, 1926, suggesting the enactment of a law by Congress to embody this same principle of *court appointed experts*.

The minutes of the proceedings of the House of Delegates of the American Medical Association of 1926⁸ (p. 34) contains the following:

"Resolved, That the House of Delegates endorses the principle that in civil and criminal cases the Court may appoint expert medical witnesses, who shall be paid out of public funds, and who may furnish a written report; and that the American Medical Association offers its cooperation by such means as lie in its power to promote such legislation as will be mutually satisfactory to the medical and legal professions toward the correction of the present unsatisfactory procedure of presenting expert opinion evidence, and the Board of Trustees is hereby requested to use the facilities of this organization in such a way as to give effect to the sentiments expressed in this resolution.

And further that the House of Delegates en-

dorses certain principles approved by the Committee on Jurisprudence and Legal Reform of the American Bar Association, and by the American Institute of Criminal Law and Criminology as follows:

That in civil and criminal cases where the issue of insanity is raised, expert medical witnesses may be appointed by the Court, and paid from public funds, and that such witnesses may present a written report."

II. INDIVIDUAL OPINION

Several state legislators were interviewed as well as a number of leading lawyers in the state, including several who had held or are holding judicial positions. Expressions of opinion varied. One senator, who is also a lawyer, held that our New Jersey law is excellent as it stands, admitted no outstanding abuse, and thought that change in this direction was inadvisable. One judge remarked flatly that if the doctors were not pleased they should clean their own house. Mr. Stryker, at the Tristate Conference in February, 1928, presented a splendid analysis of the whole question⁹, but offered the same weak and unconstructive conclusion, that remedy lay within the ranks of the medical profession and not in new and different legislation.

With these few exceptions, opinion was united that a change is needed. There were wide variations as to remedies suggested, but all concurred finally that the one being tried in California is the most practicable.

III. STATE BAR ASSOCIATION

We approached the State Bar Association and met at once with the heartiest coöperaton from their committee on Expert Evidence. Judge Nelson Y. Dungan, of the Essex Circuit Court, their Chairman, was strongly in favor of change and eager for any assistance your committee might lend the Bar Association's committee. At the time we made contact with Judge Dungan they were preparing to lay the matter before the State Bar Association in February.

The result of their work was a report with recommendation of a bill which with some minor changes was finally accepted by the State Bar Association at their Annual Meeting June 1, 1928.

In a communication to your committee regarding the acceptance of this report Judge Dungan says: "This report was presented at the mid-winter meeting in Newark in February, when very little consideration was given to it, the only action taken being to refer it to the annual meeting. I feared at that meeting it would meet the same fate, but to my surprise I found the association ready for action; . . . and further: I think it will add very much to the chances of success of this bill if it may have the consideration and approval of your committee and of the State Medical Association."

Thus we see that under the wise leadership of Judge Dungan the Bar Association is not only ready to coöperate but has already set the machinery in motion and drawn up a bill to be presented to the next session of the legislature.

SYNOPSIS OF PROPOSED BILL

A copy of the proposed bill is attached to this report, and your committee feels that it meets our requirements and deserves our support.

It provides: (1) That any judge or court may appoint expert witnesses not exceeding 3. That

this shall not interfere in any way with the right of the litigants to have their own experts.

(2) Such court appointed experts shall be subject to cross examination.

(3) Objections to testimony of experts shall be allowed as for any other witness.

(4) The court shall fix the compensation of such expert—in civil cases such compensation to be charged to the several parties in proportion as directed by the court. In criminal action where called by the court their compensation shall be charged to and paid by the county.

(5) All expert witnesses shall furnish the court a written statement of their opinion at least 10 days before the trial.

(6) Experts appointed by the court shall receive no compensation or fee other than that allowed by the court.

Your committee feels that this bill, if enacted into law, will constitute an entering wedge, and that, while it may not be perfect or all that everyone might want, its passage is greatly to be desired, and subsequent operation would reveal its weaknesses, which could be strengthened and corrected later.

We feel that it contains the correct basic principle, as evolved by all the constructive thought of recent years on the subject: Viz: the provision for court appointed experts in addition to whatever experts the litigants may choose to present.

Your committee therefore recommends to the Welfare Committee, if it approve this report, to urge the passage of this bill and coöperate with the Bar Association in every effort to that end.

Your committee cannot close without acknowledging and expressing appreciation of the work done by Dr. Mefford Runyon as Chairman of this committee appointed by you in 1924. Dr. Runyon had worked very hard and met with only a lukewarm and discouraging reception from the Bar Association. His efforts resulted in the presentation of a bill¹⁰ (1925) which he felt to be inadequate, but was the best that he could obtain agreement on. This bill, introduced by Senator Harrison, was defeated. However, we feel that his work at that time served to arouse interest in the matter among influential leaders of the New Jersey Bar, and that it has borne fruit in the readiness with which the Bar Association last June acted unanimously in favor of Judge Dungan's report.

A year ago, even though in ill health, Dr. Runyon gave the present committee much valuable advice, and was keenly interested in the progress made.

It is to be deeply regretted that he could not live to reap the reward of his own effort.

Respectfully submitted,

George H. Lathrope
Joseph F. Londrigan
J. Bennett Morrison

REFERENCES

1. Wisconsin Statutes, 1921, Vol 2, p. 2157, Section 4066-1-2-3-4.
2. General Laws of Rhode Island, 1923, p. 1444, Sections 18, 19, 20, 21.
3. Code of Civil Procedure, California, Chapter 156, Section 1871.
4. Laws of Michigan, 1905, p. 242.
5. People v. Dickerson, 164 Michigan 148, 129 N. W. 189.
6. Report of Special Committee on Expert

Medical Testimony to the Cleveland Bar Association, 1926.

7. Report of American Bar Association, Vol. 51 (1926), p. 437.

8. Proceedings of House of Delegates, American Medical Association, 1926, p. 34.

9. Proceedings of Tristate Conference February 4, 1928, New Jersey State Medical Journal, Vol. XXV, No. 4, p. 281.

10. Senate Bill No. 212, Session 1925-26, New Jersey Legislature.

11. Wigmore on Evidence, Vol. 1. p. 968, Section 563.

12. Wigmore on Evidence, Vol. V, p. 435-6, Section 2483.

THE PROPOSED BILL

A supplement to an act entitled, "An Act concerning evidence", Revision of 1900, approved March 23, 1900.

Be it enacted by the Senate and General Assembly of the State of New Jersey:

(1) Whenever it shall appear to any court or judge, either before or during the trial of any action, proceeding or issue, pending before such court or judge, that expert evidence is, or will be required in such action, proceeding or issue, such court or judge, may, on motion of any party or on motion of such court or judge, upon notice to the parties or their attorneys, appoint 1 or more disinterested and impartial expert witnesses, not exceeding 3, to examine and investigate and to testify at the trial of such action, proceeding or issue relative to the matter or matters as to which such expert evidence is or will be required. Provided, however, that nothing contained in this section shall be deemed or construed to prevent any party to any action, proceeding or issue from producing other great evidence as to such matter or matters.

(2) The fact that such expert witness or witnesses have been appointed by the court or judge shall be made known to the jury, but any expert so appointed by the court or judge and examined as a witness shall be subject to examination and objection as to his competency, bias and qualifications, and may be cross-examined by the several parties to the action, proceeding or issue in such order as the court may direct, and the jury shall be instructed that the testimony of such expert or experts shall be weighed the same as that of any expert produced by the parties.

(3) When such witness is called and examined by the court or judge, the party shall have the same right to object to the questions asked and the evidence adduced as though such witness were called and examined by an adverse party.

(4) The court or judge may fix the compensation of such expert witnesses for such examination and investigation as they may be required to make and for giving expert evidence at the trial, proceeding, or issue, at such amount or amounts as to the court or judge may seem reasonable. In civil cases such compensation shall, in the first instance, be apportioned and charged to the several parties, and be paid or secured by them, in such proportion as the court or judge may determine and direct, and may thereafter be allowed and taxed in like manner as other costs. In criminal actions where such expert witness or witnesses are called on motion of the defendant, such compensation shall be charged to and

paid by such defendant, or, if called on motion of more than one defendant, shall be apportioned and charged to and paid by such defendants, as the court or judge may determine and direct, and when called by the prosecution, or on motion of the court or judge, shall be charged to and paid by the county in which such criminal trial or proceeding is pending.

(5) Every expert witness shall deliver personally, or by registered mail, to the court or judge and to the parties in the cause, a written statement of the conclusions reached, at least 10 days before the trial of the cause in which he may be appointed, unless the appointment may have been made within 10 days before the trial, or at the trial, in which event a written statement of the conclusions shall be furnished as aforesaid within a reasonable time, to be fixed by the court or judge.

(6) Expert witnesses appointed by the court or judge shall receive no other compensation, fee or reward than that fixed and allowed by such court or judge, and any such expert witness who shall accept any compensation, fee or reward in addition to that fixed and allowed by the court or judge and any person or persons who may offer or promise, or who shall pay to such expert witness any such additional compensation, fee or reward shall be guilty of contempt of court, and upon conviction thereof, shall be punished accordingly.

(7) This Act shall take effect immediately.

OBJECT

The object of this bill is to correct the abuses which so frequently occur in giving expert evidence in court, where the bias and prejudice of such experts in favor of their employer is often so plainly manifested, by providing for the appointment of impartial, disinterested expert witnesses by the court or judge, either on the motion of such court or judge, or on the motion of the parties to the action, to testify at the trial of said action, and to provide for the compensation of such expert witnesses; and to prescribe a penalty for the acceptance by such expert witnesses of any compensation, fee or reward in addition to that fixed and allowed by the court or judge, and for the offer or promise or payment by any person or persons of any compensation, fee or reward in excess of that so fixed and allowed.

Dr. Lathrop: Your committee recommends that the Welfare Committee shall endorse the proposed bill and give full support to the Bar Association in its efforts to secure passage of this act.

Dr. Green: I move that this splendid report be received and that the recommendations be adopted.

Dr. McBride: I want to add my word of commendation, to that expressed by Dr. Green, and which is felt by all of us, for the excellent piece of work performed by Dr. Lathrop's committee; especially, do I believe that we are all deeply indebted to the hard-working Chairman of that committee.

Dr. Costill: This bill proposes that the court "may" appoint experts; why not make it "shall"?

Dr. Lathrop: The act is not made obligatory in any state and I believe the lawyers feel strongly opposed to making it so; we could not secure the support of the Bar Association for any such posi-

tive statement. Incidentally, I may say that all of the court judges with whom we have discussed the matter feel that this is a splendid bill. It may not work out very well in the lower courts, but in the higher courts where the judges are men of better caliber it will be effective.

Dr. Green's motion was seconded and unanimously adopted.

Executive Secretary: Mr. Chairman, I wish to explain that I received your letter of October 24, requesting that we draft "a blank form for the reporting of all defects at birth so that the Rehabilitation Commission might adopt this form and make it a part of the birth record", but not only has the intervening time been too short to permit preparing a satisfactory form but I doubted the advisability of my attempting to do so. Would it not be better to appoint a special committee to consider this matter, perhaps a committee composed of one or more representatives of the Rehabilitation Commission, or members of this committee familiar with the rehabilitation work, and one or more members who are actively engaged in general practice?

Dr. Larkey: Would it not be sufficient to request that there shall be a space on the regulation birth certificate for answering the question—"Are there any defects present?"

Drs. Ely, J. G. Coleman, Schureman, Lathrope, Davis, Cosgrove and Schaffler all discussed the importance of this question with special reference to the work being done in some of the counties by nurses, baby clinics and other welfare organizations, and Dr. Schaffler moved that the chairman appoint a special committee of 3 to consider this matter.

Dr. McBride appointed the following committee, after adoption of the motion: Lancelot Ely, Chairman, J. G. Coleman and James S. Schureman.

Dr. Cosgrove: I am glad to have gotten the information presented this afternoon concerning the work of our state nurses and the Child Hygiene Bureau, and I promise to take it back at once to the State Board of Health.

Dr. Hunter: For benefit of the newer members of the Welfare Committee, I want to repeat and reinforce our chairman's recommendations of each past season, that the place for missionary work among members of the legislature is at their respective homes. If we will each make it a point to see our assemblymen and senator, to explain the objects of the medical profession and our attitude toward pending or prospective legislative matters, we will accomplish more effective results than by any amount of labor at Trenton during the sessions. Senator Davis, of Gloucester County, was invited to meet with our county medical society and he was pleased to get our views upon public questions. Incidentally, he spoke of the excellent letters that had been sent from time to time to members of the Legislature by our Executive Secretary, and said that those letters had often been the only reliable information the legislative members had to guide them in voting upon pending bills.

Dr. Mulford: I want to take advantage of this opportunity to thank all of you for having accepted appointment to this committee and to express appreciation of the very full attendance at this meeting.

The meeting then adjourned.

Henry O. Reik, M.D.,
Secretary.

ANNUAL CONVENTION OF THE NEW JERSEY TUBERCULOSIS LEAGUE

Held at Atlantic City, October 25-26, 1928

Through the courtesy of Mr. Ernest D. Easton, Executive Secretary of the League, the Journal has been supplied with this report of the convention proceedings.

The sessions were well attended; 150 representatives of the 35 health organizations of the state being present, together with many hospital superintendents and specialists in tuberculosis work. Election of officers for the ensuing year resulted as follows: President, Dr. John E. Runnells, of Scotch Plains; Vice-President, Dr. Joseph R. Morrow, of Oradell; Secretary, Mrs. E. G. Shreve, of Pleasantville; Treasurer, Mr. W. L. Kinkead, of Glen Rock.

PRESIDENTIAL ADDRESS

Marcus W. Newcomb, M.D.,

Brown's Mills, N. J.

In my brief address I shall attempt to touch the high spots of work accomplished by the New Jersey Tuberculosis League during the years of my incumbency as President, in 1927-28.

DEATH RATE

We are glad to note a marked decline in death rate over that of the 2 preceding years. In 1927, our death rate for the state was 77.9 per 100,000; in 1925, it was 82.9 and in 1926, 86.6. This means a saving of 185 lives over the 1925 death rate and 330 lives over the 1926 death rate; an economic saving to the state of from \$1,000,000 to \$2,000,000 per year. A number of factors enter into this record. Along with education of the masses as to methods of right living, there has been an intensive follow-up of the afflicted by our nurses; special efforts to see that all contacts are examined and are on guard against further infection; a higher standard of living; and a gradual increase in the number of sanatorium beds for restoring many to health and lives of usefulness.

THE NURSES

Too high a tribute cannot be paid to the work of the nurses. It is they who find the cases, get them into sanatoriums and follow them up on their return. For several years, it has been the policy of the State League to assist counties unable to provide nursing service. Now, we are able to say that no part of the state is without its clinics and nurses. In 1927, we paid out \$12,576.72, and in 1928 we will pay out nearly \$14,000 to local communities for nursing service. About \$7500 of this, however, comes back to us from local "seal sales" so that the net aid amounts to \$5000 or \$6000 per year. Gradually this work in local communities is being taken over or supplemented by the county freeholders or local boards of health—thus relieving us of financial responsibility.

THE GENERALIZED NURSE

With increase in the number of nurses and the type of service rendered, there has been a tendency to district the territory and make one nurse responsible for all the nursing in a district. Many of our nurses, in addition to the care of cases, act as school-nurses, do child hygiene work, Metropolitan work, assist in tuberculosis, dental and psychiatric clinics, and also

serve as the only social service agency in the territory. In some instances, they must also carry on the educational program for their territory. This may seem like spreading the program and doing ineffective work but in most instances it has been forced upon them by local demand and has resulted in a much larger program with increased support from public as well as private sources.

TRAINING OF NURSES

Realizing that the public health nurse should know more about tuberculosis and its relation to public health, the League gave for 2 years a course of 8 lectures in the hospital training schools of the state. Most of the 74 training schools of the state had the benefit of these lectures. In 1928, this service was turned over to the sanatorium superintendents.

THE CLINIC

Along with the nurse must go the clinic which provides the expert diagnosis. In 1927, the State Department of Institutions and Agencies was induced to give an additional appropriation of \$5000 for clinics under direction of the State Sanatorium at Glen Gardner. This has enabled the sanatorium to put on another clinician who holds frequent clinics in the rural territory not covered by Board of Health clinics, and has enabled many suspects to seek examination and also caused many physicians to use it for consultation or confirmation of diagnosis.

THE SANATORIUM

After the clinic, is the sanatorium. New Jersey is now rapidly approaching one bed for each death—the standard set by the National Tuberculosis Association. Last year there were 2830 deaths and we now have about 2250 beds in regular sanatoriums and over 600 beds in penal and insane institutions, the preventorium at Farmingdale, and institutions for surgical tuberculosis. Valley View Sanatorium in Passaic County will soon open its doors for 150 patients. Glen Gardner is about ready to dedicate its 114 bed hospital or preventorium for children. Hudson, Essex and Union Counties all report plans for an immediate enlargement of bed capacity. A noticeable change is in the number of beds provided for children; until recently only a few institutions have been able to take children.

CARE OF SURGICAL TUBERCULOSIS

For several years the League has been advocating more adequate care of patients with bone and glandular tuberculosis. Two years ago a State Committee was appointed to study the situation. This past year a survey was made and over 15,000 crippled children of the state were listed, of whom about 2500 were thought to be tuberculous. Our nurses in the state have been asked to visit these 2500 cases in order to determine their present condition and needs.

BOVINE TUBERCULOSIS

As it is conceded that the milk supply is largely responsible for bone and glandular tuberculosis, it is natural that we should turn our attention in that direction. In 1927, we gave active support to the Bureau of Animal Industry in the passage of 2 bills—the area testing of all cattle in a district when a certain number of herd owners have assented, and, pasteurization of all milk not coming from tuberculin tested cattle. These

laws are gradually being put into effect and it is gratifying to note the number of herd owners who have voluntarily requested the Department to test their cattle. In some instances this has come about through public demand for milk from tuberculin tested cattle. With enforcement of these laws we believe that the number of bone and glandular cases will be materially reduced.

REAL FUNCTION OF LEAGUE

While much of the foregoing is the work of governmental agencies, the League has had an important part in helping to start it and in backing it up. Our real function is to educate and create public opinion; to demonstrate, as long as need be, the value of sanatoriums, clinics, nurses, etc.; and, finally, to stimulate and back up movements officially taken over. It is most gratifying to us when our efforts are officially endorsed and taken over, for this leaves us free to take up some other worthwhile object and to make progress in another direction. This constant change in objective is very disconcerting to some of our workers but it seems inevitable if we are to have our programs continue a part of our community life.

CHILD HYGIENE

While our educational program in the past has been directed toward the securing of adequate sanatorium, clinic and nursing facilities, our attention has more recently been directed specifically toward the children. To build up better resistance, we have secured the general adoption by Boards of Education, of a good-health habit-forming program. Most of our schools now not only require the teaching of hygiene and health, but insist upon practice of the same. A series of inspection tests are usually required to check results. Then the anemic and underweight child is singled out for special treatment. This emphasis has brought about a more adequate medical inspection of all children and more attention to the removal of physical defects such as diseased tonsils, adenoids and teeth. Our nutrition classes are, in several communities, formed out of this group of children, and excellent results have been obtained. In many schools milk is regularly served for the underweights. Contacts which show evidence of malnutrition are given special attention in open air schools and summer camps. Dr. Chadwick's work in Massachusetts leads us to believe that all children in the upper grades and in high schools should have x-ray examination and tuberculin tests. He says that at least 20% of all children below the high school age are infected and 10% have signs, symptoms or x-ray evidence of tuberculosis. All of these children can be restored to good health if they are discovered before their lungs become diseased. All that is necessary is to provide them with good home supervision and care, or in cases where home conditions are poor, preventorium or sanatorium treatment. New Jersey has only made a beginning in use of the x-rays for our school children but it is gratifying to note that many of our county hospitals are providing preventoriums for this class of cases. We are urging our high schools and vocational schools especially, to give their pupils a complete examination, including x-ray, before discharging them on their own resources.

TEACHER TRAINING

To assist the teachers, our Child Health Department issues a monthly bulletin of suggestions. Nearly 10,000 copies have been requested

by the schools and sent out. County superintendents or principals usually receive the allotments and distribute them for their territory. The Child Health Director is also on call to assist teachers with local problems. She is called upon for Teachers' Institutes and has given courses in the 5 normal schools. She is in demand to address Parent Teacher Associations and Women's Clubs. She has the active co-operation of the Physical Training and Hygiene Department of the State.

PUBLICITY DEPARTMENT

A year ago a new department was established in the League; a Publicity Director was engaged to prepare copy for papers and trade journals and to assist locals with pattern articles and by personal contact. She prepares copy and edits the regular bulletin which will be issued 6 or 8 times a year. A weekly sheet of suggestions, called "Diagnostigrams" was issued during the Early Diagnosis Campaign. A special weekly sheet of suggestions for the seal sale is planned for this year. She has also assisted many locals in the preparation of displays and material for county fairs. The League has 12 lay films and 3 medical films which are in constant demand by our local associations, the schools and medical societies. As our films are listed with the N. J. State Museum, frequent requests come from outside our groups. At least 100,000 people per year are reached through our films.

SEAL SALE

"Christmas Seal" sale has come to be a gigantic undertaking. As experts declare the seal sale to be our greatest educational opportunity, we should not, however, think that this is time wasted. This past year the sale amounted to \$287,253.51 against \$269,779 for the preceding year, a gain of nearly \$18,000. Our per capita sale for the State is now 7.8 and we have the second highest per capita sale of any state in the Union, being exceeded by New York only.

EARLY DIAGNOSIS CAMPAIGN

The "Early Diagnosis Campaign" was first talked about by the National Association in October, 1926, and a special committee was appointed to develop material and ideas for adult health education leading to a medical examination. The committee met in January, 1927, and recommended to the National, that a campaign on the "Early Diagnosis of Tuberculosis" be conducted. The message of this campaign was to be addressed primarily to adults, and the objective was to acquaint everyone with, first, the danger signs of tuberculosis; second, to motivate all who were in doubt about their health to seek medical advice; and third, to bring to the attention of the medical profession the importance of discovering disease in its early stages. The slogan recommended was "YOU MAY HAVE TUBERCULOSIS. LET YOUR DOCTOR DECIDE", and the early symptoms were specifically mentioned, such as "too easily tired", "loss of weight", "indigestion", "cough that hangs on".

As this was an educational campaign and not a case finding one, quantities of publicity material were produced; posters of various sizes and cards to the extent of 78,750 being used in New Jersey; 400 window displays were used in 3 panel design similar to the poster; 4 page leaflet announcing and describing the campaign was sent to locals to the number of 5500; of a 6-page

folder for physicians entitled "An Appeal to the Medical Profession" 15,000 were distributed; 5000 circulars, "The Doctor Speaks", an appeal to make use of sanatoriums for early treatment were used; and 505,500 circulars were distributed in this campaign. There were special articles for the newspapers as well as for trade journals. Two films, one of 1000 feet, for lay audiences, entitled "Delay is Dangerous", and another, 2000 feet, "The Doctor Decides", for medical groups, were used. The League purchased 16 lay films for the state and 3 medical films, which were in constant demand during February, March and April of this year. Radio talks and club talks were provided with adaptations for local use. In coöperation with the State Medical Society, radio talks were given over WPG, Atlantic City, during the month of March. Coöperating with the local Board of Health, a series of talks were also given over Station WGCP, in Newark. Several other stations were used on different occasions. Stereoptican slides for announcing the campaign in the theatres, as well as electrotypes for newspapers, house organs and magazines were used extensively. The department stores and insurance companies assisted very materially in distribution of the literature. The total cost of materials used was about \$2000—or 51.8 cents per thousand population.

The response to this campaign was on the whole very gratifying. Commercial interests, fraternal organizations and clubs all gave generously of their support. It is difficult and perhaps impossible to measure or calculate results obtained. The educational appeal is not likely to lose its effect for many years to come. The National believes that one of the best results of the campaign was the opportunity it gave us to join hands with the medical profession. There was some slight criticism that the effect was merely to create business for the medical profession.

Although the appeal was to "go to the family physician", increased attendance at a number of our clinics was noted. Several of the specialists in tuberculosis reported more people coming to them for advice during the month of March. Obviously it is impossible to determine to what extent the private physician was used in this campaign. However, this campaign merely intensified the educational work which has been going on since our organizations were started 2 decades ago. Many who took no action toward having a medical examination, have received information which will stand them in good stead in years to come.

CLINIC AND NURSING SURVEY

Ernest D. Easton, Executive Secretary

According to the Framingham report, there should be 9 times as many active cases in a community as there are deaths. In 1927 there were 2830 deaths in New Jersey, so we should have 25,870 cases. We could not get the actual number of cases under supervision. In 1927 there were 5196 reported cases, which is about the same number reported for each of the past 5 years. This compares favorably with the standard of the A. P. H. A., of 2 new cases for every death. The Framingham report states that ¼ of the actual cases should be under clinic care. As a matter of fact, only about 1/6 of them are. Furthermore, the A. P. H. A. sets

a standard of 3000 visits to the clinic for every 100 deaths. According to this standard, in 1927 there should have been 83,900 visits to the clinic, while only 43,303 were reported. There is a wide variation in the actual number of visits to the clinic in different communities, some clinics exceeding the standard and others falling far short. Perhaps this discrepancy is off-set by the number of nurses' visits to homes. From very incomplete records it would seem that about 1/3 of the patients attending clinics are diagnosed as incipient, 1/3 as moderately advanced, and 1/3 far advanced cases.

Of the 66 clinics in the state (if it is a traveling clinic it is listed only once), 12 are operated by county sanatoriums in Bergen and Hudson counties; 6 by voluntary associations using the county sanatorium doctor in Camden and Union counties; 9 by boards of health in Essex and Passaic; 2 by boards of health and state sanatorium clinician; 31 by voluntary associations and Glen Gardner clinician in rural counties; and 6 by local associations entirely in Burlington, Essex, Middlesex and Morris counties. Of these, 47 make use of x-rays for the diagnosis, and 12 keep sputum records. I think that we can now say that every part of the state has fairly adequate clinic facilities.

In the minds of some of our people, as well as some on the outside, including the National Association, the question arises whether the time has not come when we should make a drive for the taking over of these clinics by public authorities. Before doing this, however, it is generally conceded that it should be done on a district or county-wide basis. In those counties operating sanatoriums it could be taken over by that institution but in most cases an extension of power should be given the sanatorium by law if it is to take over many of the functions now being performed by boards of health. In all of our rural counties, county or district boards of health should be established before asking the counties to take over the supervision of tuberculous cases. It is our intention to bring this to the attention of the 1929 Legislature to see if counties in New Jersey can be permitted to work under a county health law similar to the Hughes-Griswold Act of Ohio. At the present time, most of our rural counties are giving subsidies to our local associations which enable nurses to do this work. From a tuberculosis point of view, I believe that the clinic situation is fairly well covered in New Jersey.

THE NURSING SITUATION

In our study of the nursing situation we attempted to find out how many nurses there were in New Jersey doing public health work, including tuberculosis nurses, board of health, school and visiting nurses. We were not able to get adequate replies regarding the number of school nurses, visiting nurses, industrial nurses and Metropolitan nurses. We have 51 nurses employed by our local associations, giving a major portion of their time to tuberculosis work; 48 board of health or county sanatorium nurses are devoting their entire time to tuberculosis work; 142 nurses are doing school, child hygiene or generalized work, some of whom give bedside care or assist in some other way; 19 are doing visiting nurse work and giving some bedside care; making a total of 260 nurses. There are also a number of Metropolitan and John Hancock nurses as well as industrial nurses not recorded. Our records, substantiated in a measure

by the N. J. Organization for Public Health Nursing, indicate that there are 600 or 700 nurses in New Jersey doing public health work. The nurses from whom we got reports make about 90,000 visits a year, mostly on tuberculosis cases. The standard of the A. P. H. A., of 5000 visits for 100 deaths, would have given 196,600 visits, which is about 2/3 of the standard set.

Dr. C. E. A. Winslow, of Yale Medical School fixes a standard of one nurse for each 2000 population, exclusive of industrial nurses. Evidently New Jersey has not reached this standard, although we are approaching it. In this connection, it is interesting to note that in New York the State Board of Health will match any county board of health in an appropriation for local nursing service. Perhaps this is the next step in New Jersey to get additional nurses. It is also interesting to note that Dr. Winslow fixes his standard on the basis of a generalized nursing service. Most of our nurses include school work in their daily routine, particularly the weighing and measuring of children and the correction of physical defects. He also points out that a generalized service should have specially trained nurses along the various lines of service for supervision. Also that a generalized service calls for a nurse better trained in all lines of public health. In this connection, I might add that all but 2 of our organizations have adopted the Red Cross or the N. O. P. H. N. standard for public health nurses and all but 2 boards of health have adopted practically the same standard.

I believe we should make an effort to get our training schools to give more training in tuberculosis work and perhaps there could be an exchange with our sanatoriums so that the pupil nurses could have the benefit of sanatorium experience. The general hospitals have not been able to adapt their program for this exchange. We have considered nursing institutes for our nurses in the field. We are also interested in having an exchange of medical interns so that our doctors shall be better equipped to diagnose and treat cases of tuberculosis. We had hoped to have several tuberculosis institutes for doctors in connection with our sanatoriums, but so far no definite arrangements have been made although several plans are under consideration.

The above is only a brief quantitative report of the clinic and nursing facilities of the state. No attempt has been made to determine the character of service rendered, but I believe we have as efficient and well trained group of workers as are to be found anywhere in the United States. We have not reached the standard but are striving and are rapidly approaching it.

The next step might be a study of the patients going to hospitals and sanatoriums. Is due consideration being given to the needs of these patients? Is there proper coöperation of the sanatorium with the nurses in the field? Should a work-capacity of the patient be determined and this knowledge turned over to the nurses in the field so that they could properly supervise their patients?

I believe that other studies might be made. We have barely scratched the surface in the industrial field. Should we not study the hazardous occupations and coöperate with the Department of Labor in reducing these hazards? Almost immediately after the introduction of proper exhausts, the death rate from tuberculosis dropped $\frac{1}{2}$ in certain occupations, such as

buffers and polishers. The death rate among pottery workers is still 77% higher than the average for all occupational workers. Stone cutters, waiters, cigar makers, laundry workers, compositors, brass foundry workers, barbers and hair dressers, glass workers, clerks and bookkeepers, all have death rates varying from 22% to 75% higher than the average. Perhaps a more intensive educational campaign for this group is needed, including perhaps medical examinations. In this connection, we might ask whether tuberculosis should not be made a compensable disease so that workers can get the benefit of compensation as for other sicknesses or accidents.

In Essex County we are making a house to house survey of the negro situation in an effort to find the sources of infection and to reduce the high mortality among negroes.

With all of the territory in New Jersey now covered by local organizations, and many of these having adequate nursing and clinic facilities, I believe the time has now come when the State League should devote more of its time to an analysis of some of the conditions which are making for ill health, and to institute ways and means to provide a better health service not only by our private organizations but by the public authorities.

New legislation may have to be secured to accomplish some of the suggestions mentioned above.

WHAT IS ADEQUATE CARE FOR THE TUBERCULOUS, INCLUDING CHILDREN?

Dr. B. P. Stivelman, Chief, Pulmonary Clinic, Beth Israel Hospital, N. Y.; Consulting Physician, Tuberculosis Clinic, N. Y. Dept. of Health

Adequate treatment of tuberculosis presupposes much more than the provision of a sufficient number of beds for their care. The therapeutic triad—rest, good food and fresh air—is glibly spoken of by disinterested members of the profession and by a large proportion of the supposedly enlightened public. Experience has taught that the maintenance of no other regimen is beset with more difficulties and requires more tact, persuasion, sympathy, vision, strength of character, tenacity of purpose and accurate and scientific knowledge, than this apparently simple method of treatment.

If a patient is tuberculous, regardless of the state of the disease, I would prefer that he be admitted to an institution which has 3 types of facilities and equipment, namely, an infirmary, semi-ambulatory and ambulatory divisions. The interest of the patient will be best served physically and psychologically if, regardless of the extent of the involvement and activity of the disease, he be put to bed for a period of 6 weeks. In no other way will the importance of the cure be so indelibly impressed. If the disease shows evidence of quiescence the semi-ambulatory ward is his next destination. When quiescence is firmly established the ambulatory ward will bid him welcome.

In the infirmary a tuberculous patient is not unlike one sick with any other acute serious ail-

ment. This means that he needs adequate nursing care. To under-nurse a tuberculous ward on the ground that we are dealing with chronic patients is false economy and in the light of results obtainable inexcusable. The tuberculosis infirmary is not unlike an acute hospital ward and must have similar surgical, roentgenologic and dietetic equipment. The high per capita cost, the nightmare of superintendents, will be compensated by the lower expenditure in the units catering to the more favorable patients. Institutions with the lowest per capita expenditure are, as a rule, lowest in the scale of efficiency and public service. Advancement in the surgical treatment of tuberculosis renders no equipment too good for the tuberculosis infirmary. Competent surgeons insist and deserve the best equipment. Saving of a dollar may mean loss of a life.

Most tuberculous complications can be definitely ascertained only by means of the laboratory, which of course includes the all important x-ray apparatus. The resident staff needs the inspiration engendered by the opportunity to follow a research problem and institutions supporting laboratories rank highest, not only in the esteem of the profession, but in that of the sufferers who seek a haven.

The least defined term in the therapeutic triad in tuberculosis is "good food". It is tacitly assumed that good food presupposes fine products, ample in quantity, acceptably prepared. Phthisiologists have or should have long given up the idea of superalimentation. Of what good is it to have a fat tuberculous patient who cannot carry his weight comfortably? Obesity strains the heart and lungs. It is the thin tuberculous individuals who have the best longevity. Superalimentation may be indicated in exceptional cases, but as a rule heavy lunches between meals are a burden on the digestive tract and cause no little inconvenience if not actual complications.

Even dieticians who used to derive satisfaction from computing the figures of caloric requirements have learned that what patients need is food they can eat and enjoy. Chefs are as temperamental as prima donnas, but are more amenable to reason. Preparation of food often holds the key to the patient's happiness. While at the institution, a patient preparing for the ministry once facetiously remarked that he believed the chef to be too religious; every dish prepared was either a sacrifice or a burnt offering. The cuisine is one of the most important, if not the cardinal, links in the chain of institutional management, and all efforts should be bent toward conducting it in an acceptable manner.

Many are the acceptable adjuncts in the therapy of tuberculosis, but none is efficacious without physical and mental repose. On the other hand, rest unaided by other methods has brought about the recovery of millions of tuberculous patients. It follows, therefore, that the cornerstone of our therapy is *rest* and then some *more rest*. One of the few causes of discharge of patients for bad conduct in all well regulated hospitals is lack of compliance with regulations dealing with rest.

There is no question that patients benefit greatly by diversional therapy if the department is conducted by a sagacious director who has full coöperation of the physician in chief. While the

hypercritical will find more of the artistry and effort of the teacher than the patient in the articles produced and exhibited, the patient nevertheless is made happier and less introspective as a result of diversional therapy during the period of enforced idleness.

It is of greatest importance in institutions for children not only to provide diversional therapy but also to provide schooling facilities so that whenever possible little of the child's education will be sacrificed as a result of his invalidism. In the case of bone or joint tuberculosis a great deal can be done for the child's education so that by the time his disability has been conquered or ameliorated he may have acquired knowledge sufficient for the class that his more fortunate colleagues have normally reached. The housing of tuberculous children in or near wards for tuberculous adults is most deplorable, although still resorted to in locations where facilities for their care are inadequate or wanting.

It is only fair to touch lightly on the rôle of the general hospital in the care of the tuberculous. While it is undeniable that the consumptive can be treated most effectively in institutions specially conducted for this purpose, the opportunities of the general hospital to render invaluable service in the fight against tuberculosis are manifold. General hospitals, whether maintained by municipalities or philanthropic contributions, should admit suspects for observation, and the definitely tuberculous for treatment, pending their entry to a tuberculosis hospital. The long wait for a vacancy which ever so often results in aggravation in the condition of the patient would be converted into a useful period of presanatorium care and thus unquestionably increase the patient's chance of recovery. Moreover, by temporary care of the tuberculous patients in general hospitals the younger, and even older, physicians would be enabled to gain knowledge of the disease which their curriculum at college failed to provide. The specialist in tuberculosis sees few early cases. It is to the general practitioner that the patient turns for advice when his lesion is still incipient. But, innocent of knowledge of its manifestations and unable to detect the signs of early disease, the young physician, otherwise well trained in a hospital open to all but the tuberculous, misses his greatest opportunity for good service to the patient at a time when cure is not impossible and arrest of the disease easily attainable. The hospital staff need not fear exogenous tuberculous infection. When patients with such highly infectious diseases as typhoid fever or meningitis are accepted into the general ward, it requires a different sort of logic than we are accustomed to hear, to make us content with the barring of patients with tuberculosis, one of the least communicable or infectious diseases in adult life. Can we point the finger of scorn at the ignorant who fairly ostracize their tuberculous colleagues, when we who know better encourage such unwarranted phthisiophobia?

Let us hope that the State of New Jersey, which has long been among the leaders in care of the tuberculous and is among the few states which offer substantial subvention to its county institutions, will also be among the first to do away with this ostracism which undoubtedly causes untold hardships to sufferers from tuberculosis.

AFTER-CARE OF TUBERCULOUS PATIENTS; from a Physician's View-Point

Dr. Chas. I. Silk, Perth Amboy

After-care of tuberculous patients is so vague an expression that we are constrained to ask—after what? If it refers to sanatorium residence and regimen, the answer will vary according to the type of care and for what length of time the patient will receive it, the character of instruction given and his ability to benefit by it. It will also depend upon the clinico-pathologic, general physical, social and economic conditions the patient finds himself in upon leaving the institution. There are comparatively few patients whose stay in a sanatorium is of long enough duration to permit full clinical recovery, and still fewer who have the opportunity, not only for clinical recovery, but for hardening and restoration to full working capacity as well.

This conception of after-care, however, emphasis on "after", leaves out of consideration the bulk of the tuberculous, who never enter a sanatorium at all, constituting about 80% to 85%; while a considerable number of the rest of the 15% to 20% who do avail themselves of the 70,000 sanatorium beds provided for in the United States, leave the institution in less than 1 month. Obviously, then, the definition of "after-care" must be so formulated as to take in a particular group of the tuberculous which has gone through some form of treatment, in or outside of a sanatorium, which puts that group in a class by itself. In other words, by "after-care" we mean the attention, advice and supervision a tuberculous individual receives after his lesion has sufficiently healed and his general physical condition has so improved as to warrant his resumption of some form of occupation, part or fulltime, so as to enable him to take his position in the social economic structure to whatever extent his health may warrant. The purpose of after-care is to prevent relapse and spread of infection; therefore, it must be based on sound medical principles although the problem is largely social and economic.

For the diagnosis and initial care of the tuberculous there has been developed in the United States during the past quarter of a century an enormously large and complex structure, costing untold millions in money and human effort but the after-care is still in a feeble experimental stage. Estimating the average time it takes to arrest a frank case of pulmonary tuberculosis at 1½ years at an average cost of \$1800, and an average loss in earnings over the same period of another \$1800, making a total loss of \$3600 due to relapse of such a case, it surely would be sound business to make some additional investment for the protection and insurance of this principal amount and against a further loss which must be incurred in repeating the treatment with the great probability of much poorer results or even the loss of life after a long, lingering ailment.

The outstanding problem in after-care is the setting up of proper apparatus on a comprehensive scale, comparable to that used in the prevention, diagnosis and initial care of the tuberculous. When we have worked out a suitable scheme and put in motion the necessary machinery for same, only then can we hope to approach the question of the prevention of relapse with some measure of assurance for success.

Close coöperation between the sanatorium or resort specialists with the clinic or home specialist in tuberculosis is one of the prerequisites in proper after-care of the tuberculous. No patient should be allowed to return home without careful instructions and an earnest effort to get in touch with his home physician, giving the latter a resumé of the patient's record, including x-ray reports, to serve as a guide in the after-care. Placement bureaus, where all suitable occupations and available positions are listed, with trained workers in charge, is another desideratum. Some agency must make this important phase of the work its business. Vocational training is another great necessity in some cases and for these suitable training facilities must be provided for their industrial rehabilitation. The development of farm colonies, industrial settlements and special work shops such as exist at Papworth, England, Potts Memorial at Livingston, N. Y., and Altro Shops at New York City, should be encouraged and perfected, preferably in connection with nearby well located and properly conducted sanatoriums where the patient can have the advantage of expert supervision under most favorable working conditions.

That such a plan is feasible is attested by the reports of results obtained in the institutions just mentioned, as well as from other sources. To quote but one instance, the report from the sanatorium of the Metropolitan Life Insurance Company shows that of 896 discharged patients 80% were at work 7 years afterward. Verily, supervision is the keynote to successful after-care of the tuberculous.

In the present scheme of tuberculosis care, as generally practiced in this country, the chief duty of the family physician is that of conscientious coöperation with the different agencies, private as well as public, that have been set up for the prevention, diagnosis, treatment and follow-up work of the tuberculous. First of all he must take cognizance of their existence and then acquaint himself with their *modus operandi* by keeping in close touch with them. Past experience taught us that unless the family physician has been well trained and had sufficient experience in handling tuberculosis, he should under no circumstances undertake the care or after-care of a tuberculous patient except under the direction of a competent phthisiologist.

Intelligent supervision being the keynote in the successful after-care of the tuberculous, it matters very little whether the medical advice comes from the head of a sanatorium, board of health, tuberculosis association or the family physician, provided it is based on an intelligent understanding of the principle involved.

THE TUBERCULOSIS ASSOCIATION'S RESPONSIBILITY

Miss Laura J. Walden, R.N., Plainfield

The Union County Tuberculosis League believes its responsibility begins when the patient's name is received in the office. We believe that we are responsible for making, or causing to be made, whatever arrangements may be necessary to enable the patient to go to the sanatorium with a mind at rest so far as the welfare of the family is concerned. Whatever the problem may be it should be satisfactorily arranged before the patient goes to the sanatorium so that he may derive full benefit from his stay there. This

brings us to the next step, the period we are discussing tonight, that of "after-care".

In most instances the patient has learned during his stay at the sanatorium the importance of following the doctor's advice. He now returns to his family looking better and weighing more, perhaps, than has ever before been the case. Looking better and weighing more, perhaps, than any other member of the family, and we sometimes find this family looking upon the patient as a shirker because he doesn't want to work in the garden for 3 or 4 hours every evening, or paint the house, or carry out the ashes. This return home, so long anticipated by the patient and his family, is not turning out as expected and so, sometimes, we find the patient doing imprudent things—even when he knows they are imprudent—for the sake of maintaining peace in his household. Isn't there something that the local association can do to prevent such situations from arising? I think so. By continuing our visits to this family while the patient is in the sanatorium we can educate these people along the same lines that the patient is being educated. Without discouraging the relatives, we can caution them about the deceptive appearance so often present in this disease. When the family has been given a clear understanding of the importance of the right kind of "after-care" much has been done toward helping the patient through this critical period.

THE HEALTH DEPARTMENT'S RESPONSIBILITY

Dr. M. J. Fine, Director, Tuberculosis Division, Newark Department of Health

It has been a too widely accepted belief that a few months in a sanatorium will cure the average tuberculosis case, and that if cure does not result no further hope of improvement can be looked for. No greater fallacy can exist for the reason that even in incipient cases improvement is slow and dependent entirely upon the conduct and resisting power of the patient. A few months spent undergoing treatment in a sanatorium without an adequate after-care regimen is not sufficient to restore the tuberculous to health; nor is it sufficient to restore him to his vocation, or to make even an approximate approach to the ability to do a normal day's work. Both common sense and past experience point to the acceptance of these facts. It is, therefore, of vital importance that an intelligent vision be exercised in providing a safe and sane system of after-care of the discharged sanatorium patient. It is apparent that far advanced cases requiring continuous sanatorium treatment cannot be considered at all industrially; only such types as show permanent and reasonably rapid improvement should come in this category. The real problem with this latter class of patients, especially where previous modes of living and economic efficiency were below par, is the difficulty of exerting a moral and stimulating influence, well regulated and without haste.

How can this end be measurably accomplished? Our first duty is to guard against a relapse; we must inculcate into the patient's mind a true appreciation of his condition, impressing upon him both the physical and, in a good many cases, mental limitations, consequent upon his disease. The patient must be protected from falling back into old habits or engaging in occupations that have an unfavorable influence upon him. We

must direct him in finding, if not congenial, at least suitable employment.

The benefits of the time put in at a sanatorium must not be over-emphasized lest over-confidence will result; while good treatment may have put the patient in the running for a successful struggle against tuberculosis, it is well to remember that the race is not won by the swift, for the speed of recovery and the return to strength should be permanent. Time, nature and prudent after-care must complete the cure begun in a sanatorium. To this end the patient and his advisors must work together to make the apparently arrested case permanently so. We must use normal means to accomplish a normal end in the case of tuberculosis, and "wild goose" experiments will never accomplish anything. There are no "quack cures" in tuberculosis.

Upon leaving the sanatorium all patients automatically come under the supervision of the Department of Health and are required to present themselves for periodic examinations and further treatment should it be necessary. Patients are also visited in their homes by the department nurses, who will materially assist in the recovery by useful counsel and direction. The influence of the nurse for health extends not only to the patient, but to the family and the public with whom contact is made. The health teaching thus disseminated by the nurse would be useless unless applied; therefore, she insists upon practical application.

The problem of the Health Department is to adjust the patient to this environment with a view of greater safety to his own health and the greatest protection to others. The nurse must understand the temperament and the aptitude of the patient and her problem is to educate and adjust the patient to his family and to the public in general. Every patient is an individual problem to the nurse and to the department. It is the duty of the nurse to develop the courage and the confidence of the patient for his final recovery.

Within the past few years we have appointed 2 nurses to do special follow-up work. One supervises patients discharged from the Essex Mountain Sanatorium at Verona and the Farmingdale Preventorium, and the other supervises all the Glen Gardner patients. I would say at the present time almost 90% of the cases discharged are under the direct supervision of the nurses. Quarterly reports are sent to the sanatorium giving the physical, social and economic condition of each patient. The patients are periodically sent to the clinics for examination to determine how their disease is progressing.

Before closing, I would suggest as a progressive step that we institute a colony for discharged patients such as has been established in many cities and counties throughout the country. Many patients when discharged from institutions return to their former surroundings and some of them have no homes to return to—for instance, many come from lodging houses. They are unable to work full time, making it difficult to obtain employment. Mental anxiety and worry brings the patient back to his original condition and he is readmitted to the institution. Why not place the discharged patients in a convalescent farm or colony where they can support themselves by learning a trade or farming, thereby defraying expenses, and relieve the congested waiting list existing at the present time for sanatorium treatment. Develop their minds and make them useful citizens of the state in-

stead of burdens to society. Colonization of our ambulatory patients, placing them on a self-supporting basis is the most urgent and vital need at this time if we are to continue the progress being made in eradication of the white plague.

HEALTH EDUCATION FOR HIGH SCHOOLS

Miss Edna Young Bond, Child Health and Nutrition Director, N. J. Tuberculosis League, Newark

The high schools at present represent the neglected field in health education. The age group in which high school students fall is a critical one from the standpoint of health. A health education program in high schools needs a different approach from that employed in elementary schools. Any attempt, therefore, to promote healthful habits of living in the high schools, by the same methods employed with success in the elementary grades, such as tooth-brush drills, weekly bath charts and other similar projects, will be met with ridicule and antagonism.

A health education program to be adequate must unify the 3 groups into which it has been customary to divide health services.

(1) *School environment*: An environment which tends to conserve and promote health and make possible the practice of health habits while in school.

(2) *Health supervision*: Supervision of the health of the individual student with emphasis on the discovery and correction of physical defects and the reduction of malnutrition.

(3) *Health instruction*: The use of academic subjects as channels through which the objective of health may be realized, and the inculcating of standards and ideals for healthful behavior.

It is not taking too much for granted to state that student health depends upon individual student interest, school interest, medical interest and home and community interest.

Educators today tell us that "health is the realization of the highest physical, mental and spiritual possibilities of the individual", and also that "health is perfect adaptation to environment". The desire for a health education program and its working out must come from within the school walls, from appraisal and survey of existing conditions. A program applied from the outside is futile.

The tuberculosis organization has a definite part to play in a health education program for high schools and comes "into the picture" through the approach of community interest. School boards may be interested in the fact that the death rate from all causes, for the age represented by the entrance to high school, is the lowest for any life period; and is nearly doubled during the next 5 years. It should not be hard for health organizations to make the community realize the necessity for high school age students to have a thorough chest examination, particularly those participating in athletics, as statistics show us that during the high school period defective hearts and lungs treble.

A stripped chest examination with stethoscope should be a minimum standard. If a history of contact with tuberculosis is shown, a tuberculin test should be given and positive reaction be radiographed. As high schools and their medical departments are not, except in rare instances, equipped with x-ray machines, this service may be offered by the local tuberculosis association or

the health department. It must be remembered, however, that the value of such a demonstration is greater if offered with the understanding that it is to be tied up with a definite health education program.

Health education is defined for us by Dr. Charles H. Elliott, Commissioner of Education, in the following phrases: "Good health can be secured only through healthful thinking and practicing co-existent with life itself. If the school is to perform its proper function, every activity that takes place within the school must contribute to the establishment and encouragement of healthful living and to the development of standards of health. All school subjects must be thought of as materials and means through which individual students become more social, more ethical and more healthful."

Therefore, may we conclude that an adequate health education program lies within easy reach of every school and can be determined by a survey and appraisal of existing conditions and that community organizations have definite contributions to make.

HEALTH SUPERVISION OF THE FAMILY

Miss Laura Woodruff, Jersey City

There are insurmountable problems in the health supervision of the tuberculous family; it is generally conceded that tuberculous infections are childhood infections in the man; the lessening of infection is dependent upon the control of the environment into which the child is born and from which he cannot escape until the home has stamped him for good or ill. Tuberculosis is also a disease that favors the poorer homes of the community, those of the lower social and economic levels. The homes of the poor offer favorable conditions for free growth of the organism within the individual, and through personal contact with all members of the family group. Tuberculosis is a childhood infection, and there are many more children in the homes of the poor. The tuberculous mother, subjected to the privation and strain of poverty, offers little resistance to the inroads of disease. Early entrance into industry, hard unskilled and unprofitable labor for long hours are not favorable to the resistance of tuberculosis in the wage earner.

The more intelligent members of the community are reached by educational propaganda. They can usually command the most competent medical care and are themselves most amenable to the self discipline which is required for successful treatment of the disease and the protection of others. The less intelligent members of the community are the last to seek medical advice—the most handicapped economically and the least altruistic in regard to the protection of others. Cooperation in dealing with these problems requires the use of all existing public and voluntary agencies.

AN INDUSTRIAL HEALTH PROGRAM

Dorathia L. M. Rusch, R.N., Industrial Health Service, New Jersey Tuberculosis League, Newark, N. J.

To the average working man, when an outlay of money has to be considered for repair work, his wife and children come first. The measure of health consciousness, contributed by our own Industrial Health Examinations, such as carried

on in the City of Newark, may be in the same class as the proverbial $\frac{1}{2}$ of 1%, but as it takes only a little leaven to leaven a whole lump, its effects may be more far-reaching than we realize; many of the examinations made may be visualized as the first ripple caused by a stone thrown into a river which keeps on spreading ripples until lost to view. The ultimate results of some examinations would be amazing and such information as we do gather in our follow-up work is proof that periodic health examinations are very much worth while. Some recent follow-up work showed that out of 160 workers interviewed, 114 had done something to correct or overcome physical defects; 37 had not done anything, and in 9 cases, no recommendations had been made—they being in the Class A group.

Within the past 2 years I have been told several times by workers who had been benefited by the examinations that if we had given them \$1000 in cash we could not have helped them more than by pointing out to them, as we did, their physical defects and urging them to go to their own doctor for correction.

Without a doubt, the workers in industry present a vast field, uncultivated, except for a spot here and there, and to bring better health to them, which would vastly increase their efficiency and their happiness, is something to which thought and time and money might be devoted with an absolute assurance of rich returns.

The Woman's Auxiliary

We take pleasure in quoting from the Texas State Journal of Medicine the following editorial because it states so succinctly exactly what our own Journal has been trying to do for the past year:

For some time now the Woman's Auxiliary to the State Medical Association of Texas has been given space in the JOURNAL, in which to discuss matters of interest among themselves and perhaps of interest to the members of the State Association. How much value there has been in this practice, to the members of both organizations or to those of either of them, we do not know, but we see no reason why we should not all take advantage of this opportunity of coordinating the efforts of our 2 organizations. If the JOURNAL is of value in bringing the members of the State Medical Association together and into coordinated thinking, it should be of value in bringing the members of the Auxiliary together in the same way and at the same time, and in the same way uniting the 2 memberships in what should be a common endeavor of making a better medical profession and bettering the public health. The members of the Woman's Auxiliary should be as thoroughly informed on medical matters as is feasible in the case of laymen. They can get this information from the JOURNAL, and we do not hesitate to offer it to them.

Atlantic County

Reported by Mrs. Lawrence A. Wilson

The Woman's Auxiliary to the Atlantic County Medical Society met at the Chalfonte Hotel, Atlantic City, October 12, 1928, Mrs. E. H. Harvey presiding in the absence of the President, Mrs. John Massey.

A report of the June Convention was given by Mrs. L. A. Wilson, one of the delegates.

November Meeting

The Woman's Auxiliary met in the Blue Room of the Chalfonte Hotel, Friday, November 9, Mrs. John F. Massey presiding.

The Nominating Committee was appointed by the President, as follows: Mrs. E. H. Harvey, Chairman; Mrs. Milton Ireland and Mrs. Samuel Barbash. Mrs. Maurice Chesler was appointed Auditor.

An amendment to the By-Laws was made and the members will be notified.

It was voted that a plant be sent to Mrs. William Martin who has been ill.

A social hour of cards followed. Mrs. S. Salasin and Mrs. Milton Ireland were awarded prizes for highest scores.

Burlington County

Reported by Mrs. Wm. C. V. Wells

The October meeting of the Woman's Auxiliary to the Burlington County Medical Society was held at the Burlington County Hospital, Mt. Holly.

The meeting was in charge of Mrs. R. E. Hadleman, of Mt. Holly.

Mrs. E. R. Mulford reported that the Burlington County Medical Society appreciated and accepted the offer of the Auxiliary to aid them in whatever way the Medical Society suggested.

The Auxiliary pledged themselves to raise a sum of money to aid in the poster project of the Antidiphtheria Campaign.

Mrs. E. C. Taneyhill gave a very interesting illustrated talk on "The Life and Work of Pasteur".

After the meeting adjourned, tea was served by the Mt. Holly members.

Camden County

Reported by Mrs. T. P. McConaghy

A regular meeting of the Woman's Auxiliary to the Camden County Medical Society was held on Tuesday evening, October 9, Mrs. A. J. Casselman, the President, in the chair.

In addition to the business meeting, reports were given by the delegates who attended the State Convention held in Atlantic City and the National Convention held in Minneapolis.

Dr. Mabel Grier Leshner, who has been in China for a number of years, was a guest of the Auxiliary and gave a very interesting talk on "Health".

After the meeting adjourned, the doctors were joined and all enjoyed the showing of a motion picture taken of a recent outing of the doctors, after which the Auxiliary served delicious refreshments.

Essex County

Reported by Mrs. Theodor Teimer

A regular meeting of the Woman's Auxiliary to Essex County Medical Society was held Monday, October 29.

Election of officers for the coming year took place with the following results: President, Mrs.

George A. Rogers; First Vice-President, Mrs. Victor Parsonnet; Second Vice-President, Mrs. F. G. Shawl; Corresponding Secretary, Mrs. Ralph Shapiro; Recording Secretary, Mrs. Theodor Teimer; Treasurer, Mrs. H. Roy Van Ness; Delegates, Mrs. Max Danzis and Mrs. W. Patterson; Alternates, Mrs. H. J. F. Wallhauser and Mrs. Theodor Teimer.

A discussion was held as to ways and means of making the auxiliary meetings attractive enough to bring together a larger number of members. On motion made by Mrs. Van Ness, it was decided that there should be something in the way of entertainment in connection with the meetings.

A card party was proposed for the next meeting on January 28, 1929.

Hudson County

Reported by Mrs. H. J. Perlberg

The opening meeting of the Auxiliary to the Hudson County Medical Society was held on Friday, October 19, at the Y. W. C. A. in Jersey City, Mrs. William Freile presiding.

At the meeting held in Atlantic City last June, Mrs. George Culver had been elected to the Board of Governors of the State Auxiliary.

The members were very pleased to learn that Mrs. Tancyhill, Field Secretary of the New Jersey State Medical Society, would deliver another of her very interesting discourses in the near future.

Dr. Howard Forman visited the meeting and explained the importance of the Antidiphtheria Campaign that is about to be waged in the county, and asked assistance of the organization. The society pledged its cooperation.

In response to a communication received through Mrs. George H. Reed, of the Nursing Activities Committee of the Red Cross, relative to an educational campaign in prenatal work, it was decided to furnish the necessary equipment and to render all possible assistance in the furtherance of the idea. Exhibits are to be held and demonstrations given to expectant mothers who will be taught simple, inexpensive and practical preparation.

After the business session, there was the usual social hour.

Hunterdon County

Reported by Miss Ida Apgar

On October 23, 1928, the Woman's Auxiliary to the Hunterdon County Medical Society met at the home of Mrs. G. B. Tompkins, Flemington, at 10:30 a. m., the President, Mrs. Tompkins, in the chair. This was the second meeting of the auxiliary.

The following officers were elected to serve until their successors are duly elected and installed (April or May): President, Mrs. G. B. Tompkins, Flemington; First Vice-President, Mrs. M. H. Leaver, Quakertown; Second Vice-President, Mrs. F. A. Hamilton, Lambertville; Recording Secretary, Miss Ida M. Apgar, Oldwick; Treasurer, Mrs. V. C. Hyde, Flemington.

The guests of the auxiliary were: Dr. Henry O. Reik, Editor of Journal of Medical Society of New Jersey, who told us of the Origin, Aims

and Results of Women's Auxiliaries; and Mrs. George Orton, President of the New Jersey State Auxiliary, who spoke of individual influence as well as the influence of a society as being the thing that really counted; Mrs. George N. J. Sommer, Trenton, reported the progress of Mercer County Auxiliary.

The meeting then adjourned, after which the auxiliary was entertained at luncheon by Mrs. G. B. Tompkins.

Passaic County

Reported by Mrs. William A. Duryea

A bridge and tea were held in Paterson on October 29, 1928, by the members of the Woman's Auxiliary to the Passaic County Medical Society. There were 50 ladies present and all enjoyed a most sociable afternoon.

The regular meeting will be held in January.

Union County

Reported by Mrs. H. V. Hubbard

We are mailing the following circular letter to every doctor's wife in Union County, in an effort to increase the membership of the Union County Auxiliary:

121 East Seventh Street
Plainfield, N. J.

Here are specific reasons why you should be an active member of the Woman's Auxiliary to the Union County Medical Society. Please consider them carefully and communicate with the secretary without delay.

Doctors' wives organized as an auxiliary can be of real service to the medical profession, acting as a medium between the profession and the laity.

A woman's organization can do much toward shaping public sentiment and changing the attitude of the public on health matters.

Organized, the women can have greater effect on legislative matters.

Through the auxiliary, speakers can be brought before our clubs and the viewpoint of organized medicine presented in this way.

The auxiliary members may be able to see that the office of Chairman of Public Health in Parent Teacher Associations, and other clubs is filled by a physician's wife or one familiar with public health matters from a medical standpoint.

There is a social side to be considered. Doctors' families naturally have a bond of sympathy which the auxiliary will strengthen into many pleasant relationships.

If you are a busy woman, do not hesitate to join. There are but 4 meetings a year, which occur the same evening on which your husband's medical society meets.

The dues are but \$1 a year and give you an opportunity to be informed of and partake in any great movement which may be of vital importance to the medical profession.

You will be notified of the next meeting. Please make an effort to be present.

As auxiliaries have been formed and are working in every state in the Union and every county in New Jersey, Union County needs you to give it 100% efficiency.

Yours truly,

County Society Reports

ATLANTIC COUNTY

Harold S. Davidson, M.D., Reporter

The regular monthly meeting of the Atlantic County Medical Society was called to order by President William C. Wescott, on Friday evening, November 9, 1928, at 9 o'clock at the Hotel Chalfonte, Atlantic City. The minutes of the previous meeting were read and approved.

Dr. W. Blair Stewart, reporting for Committee on Public Health and Sanitation, stated that his committee has been coöperating with the State Board of Medical Examiners in prosecuting illegal practitioners.

It was moved and seconded to extend an invitation to the American Medical Association to meet in Atlantic City in 1930.

Dr. Joseph H. Marcus presented a bill from the Chamber of Commerce for dues for the year, which was ordered paid.

The Nominating Committee presented the following for officers for the coming year: President, Joseph Poland; Vice-President, Robert Grier; Secretary, Joseph H. Marcus; Reporter, John Irvin; Board of Censors, D. W. Scanlan; Annual Delegates, C. B. Kaighn, W. D. Olmstead, Maurice Chesler and Homer I. Silvers.

Scientific Program

"The Newer Aspects of the Treatment of Syphilis", by Dr. Jay Frank Schamberg, Professor of Dermatology and Syphilology, University of Pennsylvania.

Dr. Schamberg opened his address with a résumé of the history of the treatment of syphilis. Every organ and tissue of the body is liable to the invasion of these spirochetes. Mercury was always the sheet anchor of the treatment of syphilis. We know now that many cases were never cured; 606 was introduced by Ehrlich in 1910; it is a very effective antisyphilitic agent. Neosalvarsan is not so effective, but is now used 10 to 1 to salvarsan, because it is more easily manipulated and can be used concentrated and without neutralization; there is not so much chance of error in its preparation; dangers of reaction are not so liable. We have now sulpharsphenamin, which is a slight modification of 914 and is less destructive to muscle tissue and so can be used intramuscularly. This is especially applicable where veins are not available, as in children and fat people.

In 1921, Levadity introduced bismuth for the treatment of syphilis; it may be more valuable than mercury; it is lower in toxicity and patients respond better to bismuth than to mercury. Bismuth is of value in all stages of syphilis and is best in congenital syphilis, as it can be given intramuscularly without pain. It is our best remedy in interstitial keratitis.

Mercury is now in third place in the treatment of syphilis. Some patients become "fast" to one or the other remedy and then we still have 2 left. The iodides do not affect the spirochete, but break down the granulomatous tissues of syphilis. They are especially useful in late and nerve syphilis.

The treatment of syphilis cannot be absolutely standardized, but can be more or less laid down. In early syphilis, arsphenamin and bismuth are

suggested. In primary and earlier secondary syphilis, an initial dose of bismuth is given. We start with this because there are millions of spirochetes and to give neosalvarsan first too many spirochetes are killed at once and there is likely to be an effect known as the Herxheimer reaction. This may lead to acute hepatitis with jaundice. The bismuth will prepare the body for the stronger remedies to come next; and 3 days later a dose of 914, varying with the patient's condition, is given. The initial dose is never more than 0.3 to 0.45 gm. Each week there is given a dose of bismuth and then a dose of 914, never going over 0.6 gm. This is not hazardous to the patient, whereas larger doses are. They get 12 doses of each and then a Wassermann test is made. If negative, they are given 8 more doses of bismuth alone and then no more treatment for 3 weeks. Then the course is repeated. The second year the courses are shortened and often mercury instead of bismuth is used.

Inunctions are especially effective, but dirty. Mercury by mouth is least effective. The treatment of neglected unrecognized syphilis is different. Here the purpose is to get rid of the symptoms and to prevent recurrences, as here you cannot quickly change the Wassermann reaction. We are often unable to cure the disease, but can keep patients free of symptoms. Here conservatism is the rule.

Visceral syphilis. Here we use arsenicals. Neosalvarsan in small doses is best; the dose is 0.05 gm., rotated with bismuth, mercury and iodides, and is kept up for a long time.

A strongly positive Wassermann means syphilis with but one exception, that is "yaws". With the improved Wassermann test, other diseases do not give a positive reaction. However, weakly positive Wassermans, that is, + 1 or so, do not always mean syphilis. If one is known to be syphilitic, the weakly positive test is significant. It should be checked up with the Kahn precipitation test. They are both delicate.

The great fallability is in the negative Wassermann. This is not always complete evidence of the absence of syphilis. Many individuals have stigmas of syphilis and still have a negative Wassermann.

Neurosyphilis, paresis and tabes are not affected by arsenicals. The best treatment now calls for the fever inducing agents. Malarial blood especially is used and as a rule 1/3 of the patients so treated go into complete remission; 1/3 go into partial remission, and 1/3 are not influenced.

Tryparsemide is often satisfactory in early paresis. It is dangerous in large doses. In cases of pronounced nerve syphilis, inoculations of malaria should be used. If there are any bad effects, treatment can be easily terminated. The degree of improvement depends on the character of the case and height of the fever; the higher the fever the better the results. After the malarial treatments, there is a regression in the pathology and the spirochetes disappear.

Heat, in experimental animals, will prevent syphilis. Spirochetes heated to 104° F. for 2 hours are innocuous or attenuated. Hot baths also have very beneficial effects upon patients. This explains the beneficial effects of Hot Springs and other resorts. Hot baths combined with other remedies are very effective. The baths aid elimination and enable the patient to take more treatment.

General Staff, Atlantic City Hospital

Joseph H. Marcus, M.D., Secretary

The regular monthly meeting of the Atlantic City Hospital Staff was called to order at 8:30 p. m., October 19, 1928, in the Nurses' Auditorium by President D. Ward Scanlan.

Report of Medical Service: Owing to the enforced absence of Dr. Salasin, the service was reported by Dr. Philip Marvel, Jr. The statistical report as presented, embodied 146 cases, with a mortality of 26. Of these mortalities, 20 necropsies were performed, and Dr. Marvel acknowledged the numerous consultations of the various special departments. He commented upon the decrease in the number of cases of diabetes that formerly were admitted in more or less comatose states but now were being admitted in much better conditions, due in all probability to the excellent care these patients were receiving both as to administration of insulin and specialized diet. The following case reports were outlined.

Case 1. Mrs. L. B., female, aged 21, admitted with chief complaints of cold in head, cough and pain in chest. The salient laboratory features disclosed a large amount of pus in the urine and a positive Widal in dilution of 1:320. Cultures of feces, blood, breast milk and urine gave no positive evidence of typhoid infection. This patient made an uncomplicated recovery. Diagnosis: Lobar pneumonia with cystopyelitis

Dr. Robert A. Kilduffe, Director of the Laboratories, commenting upon this positive Widal, stated that on some occasions there is a non-specific agglutination of typhoid, which is found in individuals who have been vaccinated, have had typhoid, or are carriers, but most frequently the agglutination occurs in dilutions of 1:40 or thereabouts.

Case 2. B. C., adult male, 67 years of age, was admitted with chief complaint "swelling of abdomen" and increasing tendency to constipation. The patient seemed in fair condition, with no marked distention of the abdomen, which on percussion was tympanitic over the entire area; absence of pain and no positive findings upon palpation. Up to the present time had good bowel movements, and high colonic irrigations returned clear. Two days later the patient was examined by Dr. Homer I. Silvers, who made the following notations: "this case embodies an intestinal obstruction of slow onset and operative interference is not justified". Patient died 2 days following admission with the following salient features disclosed at autopsy: Abdomen: the abdomen was greatly distended, due to meteorism; when peritoneum was opened there was an escape of foul-smelling gas but no fluid. The intestines, from the pyloric end of the stomach to the ileocecal junction, were greatly distended with gas. No evidence of perforation or rupture could be discovered. The transverse colon was S-shaped, due to the presence of adhesions, of which there were many between the intestinal coils. The walls of the colon were greatly hypertrophied and thickened, and at first glance resembled the stomach. About 10 in. above the ileocecal junction there was a Meckel's diverticulum. The liver was somewhat smaller than normal, cirrhotic, and slightly bile stained. The spleen was much smaller than normal and evidently markedly sclerotic. The left diaphragm was much higher than normal. The picture as a whole suggests a congenital anomaly.

The transverse colon and sigmoid were both very large, especially the sigmoid which was approximately 5 ft. in length and about 6 in. in diameter.

Case 3. Adult male, 63 years of age, complaining of pressure pain over precordium, radiating down the arms to the elbow and lasting for a period of 1 hour. His mother died of apoplexy, and the family history disclosed tuberculosis in 2 members of the family. The physical examination disclosed many carious teeth and gingivitis. There was no precordial bulging and the apex impulse was felt in fifth interspace 11 cm. to the left of the sternum. The blood pressure over the left arm was 114/86 and on the right arm 100/74. A diagnosis was made of coronary occlusion. Electrocardiographic studies of this patient showed pathognomonic signs of coronary occlusion. Patient died 10 days after admission.

An autopsy disclosed the following findings of importance: The lungs and pleura presented no gross evidence of pathology. On entering the pericardial cavity there was evidence of acute fibrinous pericarditis. The heart, which was somewhat enlarged, presented on its external surface gross evidence of a marked fibrous, plastic pericarditis. The myocardium showed a definite decrease in muscle tone and, in the apical region, a yellowish scar probably due to infarctions following coronary occlusions. There were no gross valvular lesions nor marked evidences of aortic sclerosis. (Dr. Marvel demonstrated the pathologic findings of the heart.)

A general discussion of these case reports followed and then Dr. Robert Durham, resident physician, reported the following case from the service of Dr. Clarence L. Andrews:

Carcinoma of Esophagus and Stomach with Metastasis to Liver and Lungs

This case is presented to the staff members as an example of a long standing case of carcinoma with considerable diagnostic difficulty from the laboratory and roentgenographic standpoints—and also as an excellent example of the type of patient one so often sees in a large medical service, i. e., with a history of many operations and multiple complaints.

K. B., aged 63, widow, occupation of cook, was admitted to the hospital with the following complaints: Loss of weight—100 lb.; pain over gall-bladder area; weakness and fatigue; vomiting at intervals. The family history was unimportant. Her personal history revealed a woman of good habits; contracted malaria when 22, quincy many times; pneumonia and pleurisy; leg infection in 1917; and erysipelas twice. She had undergone the following operations: fistula in anus 30 years ago; ventral strangulated hernia in 1918; removal of growth from lower end of esophagus by esophagoscopy in 1919 for esophageal obstruction; removal of subcutaneous mass from upper right abdomen in 1924; breaking up of adhesions in 1925.

Her past history was negative except for the gastro-intestinal system. She had "always" had a sore spot over the gall-bladder area. She had noticed clay colored stools twice 20 years ago. Best weight 310 lb., average weight 200 lb, present weight 156 lb. She gave an indefinite history of indigestion attacks in her early adult life. The menopause was easily passed over at the age of 46. The present illness dates back 11 months. Patient's health was fair until February 8, at

which time she was suddenly taken with a diarrhea with constant loose watery stools; has had difficulty with bowels since operation for fistula in ano; was treated at Bellevue Hospital in New York, at which time she started to vomit and was unable to take nourishment by mouth for a period of 10 weeks. The drainage persisted for 2 weeks and gradually stopped. No bloody, tarry or clay colored stools noticed. During her stay, numerous roentgenographic studies were made, and no definite information was given her upon discharge at which time she came to Atlantic City. Gradually regained strength here. A few days before admission she started to vomit in night and vomited for 2 days several times a day, accompanied with bad chills. Pain over gall-bladder started again the second day of illness and persisted for 2 days after admission and then eased up. No jaundice, and stools were hard and caked.

On physical examination the patient appeared obese with skin arrayed in large loose folds on the arms, abdomen and legs. She was apathetic in appearance and markedly debilitated.

The right pupil was smaller than the left—both reacted sluggishly to light. The few lower teeth left were decayed stumps. The tonsils were small and retracted and the posterior pharyngeal wall was hyperemic and granular. There was a foul-smelling postnasal discharge.

The thorax was large, and symmetric expansion was equal and fair in excursion. The lungs revealed many small patches of consolidation and moisture that at first were thought to be bronchopneumonia. The heart was but little enlarged and a rough systolic murmur was heard most clearly over the aortic area. Blood pressure 166/60.

The abdomen was flabby, with complete loss of muscle tone. Old scars in midabdomen—one running midline from base of the sternum almost to pubes. Old hernia about as large as a small cantaloup in midlower abdomen protrudes markedly on coughing. The liver was palpable 2 fingers below the costal edge and clearly nodular. On deep palpation there was a sense of resistance, due to a mass in the left flank.

Both supraclavicular spaces depressed. Chest showed under-nutrition. Expansion of anterior chest was equal and ample, tactile fremitus was exaggerated over both apices and the infraclavicular areas anteriorly to level of third interspaces; also exaggerated over right interscapular area in region of spines, and also right base posteriorly below angle of scapula. Percussion note dull over left apex, flat over right apex. Dull right axilla, flat in right upper axilla. Dull over both suprascapular areas and right interscapular area near spine; dull over right base posteriorly about 2 in. to right of spine. Auscultation revealed a few fine dry crackling râles in right chest anteriorly below clavicle. Breath sounds markedly diminished in right lower axilla. Few fine dry râles over both suprascapular fossae posteriorly. Breath sounds louder and more intense over left lung than right. Breath sounds very faintly audible in right base posteriorly. There was an area at the angle of the scapula of coarse bubbling râles. Voice sounds not transmitted to right base. Examination of the heart disclosed a rough systolic murmur over the aortic area, most intense at third cartilage level.

The extremities, glandular and nervous systems were negative.

X-ray examination of the chest showed several

small areas of density throughout both lungs suggestive of metastasis. The gastro-intestinal tract was ordered studied but Dr. Charles Kaighn reported an esophageal obstruction with the fluid level under the fluoroscope which allowed but very little barium to pass into the stomach, making radiograph study impossible. The opaque enema was tried but due to loss of sphincter control the enema was not retained. This latter condition has troubled her ever since her fistula in ano operation.

Wassermann of the blood, and Kahn tests, were negative. Her urine gave evidence of a mild chronic nephritis. The leukocyte and differential count on admission showed 16,700 leukocytes with 79% polymorphonuclears and 23% small lymphocytes. The complete blood count showed a moderate secondary anemia.

Progress: The case was one of gradual increase in strength under a course of treatment consisting merely of symptomatic relief and efficient nursing care in building up nutrition. On the fifth day after admission the patient regurgitated a whole undigested raw oyster she had swallowed 9 days previously.

Ten days after admission the patient felt so much better that she signed her release to go home, against our advice. She has been asked and has consented to return for follow-up observation in the outpatient clinic where further study will be made.

Dr. Robert A. Kilduffe's clinical interpretation of the laboratory findings follows: The laboratory findings in this case are of interest mainly as concerns examination of the vomitus. The fact that the vomited material is microscopically recognizable as containing material ingested 9 days before is evidence per se of one of 3 things: (a) Gastric retention because of atony; (b) or because of obstruction, as by a neoplasm; (c) retention of the vomited material in the esophageal diverticulum known to be present. The balance of probability is against the last suggestion. Still more significant of retention in the stomach is the presence of a relatively large amount of lactic acid.

The same is true of the rather large bacilli seen, some of which belong in the lactic acid group and others, perhaps, in the group known as Boas-Oppler bacilli.

The sum total of evidence so far as the vomitus is concerned indicates retention but gives no definite evidence as to where the retention occurred. Somewhat more differential information, however, is obtained by the fractional gastric analysis. Here there is shown a definite and marked HCl deficit, coupled with the presence of lactic acid which, taken in conjunction with the other findings referable to the stomach, is conformable with a diagnosis of neoplasm, probably gastric carcinoma, although this diagnosis cannot be made with certainty on this finding alone.

While there is a history of a loss of 100 lb. in weight, this loss extends over a considerable period and must be interpreted in conjunction with the fact that there is an esophageal stricture (postoperative), the fact that there have been previous attacks involving the gall-bladder and alimentary tract, and the further fact that the gastric function has very probably long been below par; all of which lead to the justifiable suspicion that diet may have been somewhat curtailed and also that the ingested food may not have been perfectly utilized. Moreover, the pa-

tient is far from emaciated and certainly not cachectic in appearance; nor has she such evidence of secondary anemia as might be expected in the presence of a gastric malignancy of long standing. Furthermore, though the x-ray examination of the lungs shows areas of density "suggesting metastasis" it is justifiable to wonder if these would have been so interpreted in the absence of knowledge as to a clinical suspicion of malignancy elsewhere. Again, while the liver is enlarged and rough, is this metastatic malignancy, and if so, how can we account for the relatively good condition of the patient and the absence of signs significant of hepatic malignancy, or is it possible that there is an hepatic cirrhosis, biliary in type, and referable to the repeated flare-up of a chronically infected gall-bladder in which, perhaps, there may be stones?

In the last analysis, while a carcinoma of the stomach is certainly a diagnostic possibility, it remains as yet unproved.

BERGEN COUNTY

Spencer T. Snedecor, Reporter

Dr. Wilfred M. Barton, Professor of Medicine at Georgetown University, in his talk on "Drugs" took the doctors back to medical school days when therapeutics and "treating the patient" were actually taught.

Before coming to that subject, however, it is important to note that the Holy Name Hospital was our host and the Entertainment Committee was reimbursed for a small deficit at the annual dinner.

Dr. S. T. Snedecor reported a letter from Dr. Andrew F. McBride covering the subject of additional compensation facilities for Bergen County. Dr. McBride stated that the county was fairly well covered by the Paterson Office of the Labor Commission. Several members disagreed with this position, insisting that Bergen County with a half million population was entitled to better compensation facilities. A motion was passed requesting Dr. McBride to come to the next meeting and discuss the question.

Medical ethics and the propriety of direct and indirect advertising in the newspapers was sharply argued on the occasion of the application of a physician for transfer into membership in this county. A motion was finally passed authorizing the President to appoint a committee of five to draw up a code of ethics which should be a guide for all members of the society.

Dr. Barton's talk was excellent. He has promised to forward it to us for publication in the Journal. In a practical way he described the indications and uses of 4 strikingly effective drugs: novasurol, quinidin, stovarsol and Lugol's solution.

Novasurol, or meraphen, is a mercury preparation with strong diuretic action. Its effect is due to a biochemic reaction and is as a rule non-toxic. Striking results have been observed in many cases of edema and ascites. In some instances as many as 4 to 10 qt. have been passed the first day. It is indicated in edema from cardiac failure, cirrhosis of the liver, chronic glomerular nephritis, and other retention diseases. The dosage is 2 c.c. twice a week intramuscularly or intravenously. Better results are obtained when one of the nitrates or ammonium chloride (5 to 15 gr.) is given with it.

Quinidin, a drug from the cinchona group, like pneumoquin, is indicated in paroxysmal tachycardia and auricular fibrillation without decompensation. It should not be given when the heart is badly decompensated. The patient should be at rest in bed. The action of this drug lessens the conductivity mechanism of the heart and slows the action until normal rhythm establishes itself. It may be tried with reasonable safety in the home. The danger lies in dislodging a mural thrombus, an uncontrollable event. The procedure is as follows: A 4 gr. dose is administered the first day, and 8 gr. the second. If no ill effect is observed, 8 gr. is given daily for a week or 10 days.

Stovarsol has been found to be a specific for endomeba histolyticus. This disease is much more common than is realized. A routine study of the stools will reveal many cases. Stovarsol in doses of $\frac{1}{2}$ tablet 3 times a day for a week has a specific action in destroying the ameba. The course may be repeated after a week of interval.

An old remedy with the new value is Lugol's solution of iodine. In preparing thyroid cases for operation or in treating those terrible crises of exophthalmic goiter, its action is invaluable.

CAMDEN COUNTY

R. E. Schall, M.D., Reporter

The Camden County Medical Society was called to order by President Grafton E. Day. The minutes of the previous meeting were read and approved.

Drs. A. M. McCarthy and Charles E. Pike were elected to membership in the society.

Dr. A. H. Lippincott, a member of the State Welfare Committee, reported on proposed legislation which if passed will be of interest to doctors and hospitals.

Dr. William G. Martin, Atlantic City, Ex-President of the American Electrotherapeutic Society, gave a very instructive and interesting talk on "Electrotherapy". We have 3 main features in currents. We have the direct current for electrolysis which is subject to variations. Dr. Martin has visited many sanatoriums but has never seen a purely static current used. The static current is purely mechanical having no appreciable heat. Sprains and bruises of the ankle or any part of the body are very successfully treated by the static current. There is an exudate into the muscles when sprained; this exudate is first thin and after a few days firm. If treatment is given before this exudate becomes firm it is much more effective. If the sprain has become firm, diathermy with the static will greatly hasten results. The current should never be used over areas with pus underneath. The effect of high frequency is heat. You cannot get this kind of heat from a hot water bottle or lamp, as they furnish external heat, but the high frequency furnishes internal heat or heat that goes through the parts. High frequency relieves inflammation. This line of work should always be in the hands of a physician.

Hepatic stasis causes headaches and dizziness and cardiac symptoms. These can be cured by a few treatments. Use diathermy to the heart as well as the liver. (Use a very low current to the heart.)

Martin believes we have a pseudo-angina, which may be traced to a neuritis, as very fre-

quently in these cases we have pain in the left shoulder. He says this case may be cured by a few treatments.

Bell's palsy can be cured by diathermy; it is usually caused by cold.

Dr. Lippincott: Do you treat pneumonia with diathermy?

Dr. Martin: In pneumonia treated by diathermy, we do not have a crisis. Cold in the head, also pneumonias, are treated by diathermy.

Dr. Davis: A great many cases of eclampsia are caused from liver trouble. Would diathermy benefit these cases?

Dr. Martin: I do not know. I believe they would.

ESSEX COUNTY

Frank W. Pinneo, M.D., Secretary

The Essex County Medical Society held a meeting Thursday evening, November 8, 1928, in the auditorium of the Academy of Medicine, 91 Lincoln Park, Newark, N. J., President Richard N. Connolly presiding. About 75 members were present. The minutes of the previous meeting were read by the Secretary, Dr. Frank W. Pinneo. Sixteen physicians were elected members of the society: Charles E. A. Ball, 153 Valley Street, South Orange; H. W. Brown, 1093 Broad Street, Newark; Katherine K. Burnet, 15 Arlington Avenue, East Orange; Everett K. Dulin, 73 No. Arlington Avenue, East Orange; Edward M. Finesilver, 31 Lincoln Park, Newark; William H. Glass, 108 High Street, Orange; Samuel Halpern, 22 Hill Street, Newark; James T. Houghton, 20 Clinton Street, Newark; M. Lionel Ignatoff, 115 Lehigh Avenue, Newark; Theodore R. Inge, 134 W. Kinney Street, Newark; A. A. Phillips, 150 Walnut Street, Newark; Francis W. Pizzi, 205 Park Avenue, Orange; Amos A. Plante, 228 Dunnell Road, Maplewood; Philip J. Santora, 192 Elm Street, Newark; Nicholas Schiller, 402 Clinton Avenue, Newark; Ludwig L. Simon, 214 Ferry Street, Newark.

The speaker of the evening, Dr. Frederick W. Rice, attending obstetrician at Bellevue Hospital, New York City, delivered an address on "Maternal Welfare". He urged greater emphasis on teaching obstetrics, in a plea for reduction of the number of deaths. He reminded the audience of the alarming mortality statistics in the United States, which have remained practically stationary during the past 25 years. Dr. Rice advised better training of physicians with reference to care of women during pregnancy, labor and the puerperium.

The discussion was opened by Dr. Nathaniel G. Price, President of the Essex County Maternal Welfare Commission, who described the activities of that organization.

Dr. Arthur W. Bingham made several valuable suggestions for improvements in obstetric practice. He said that better care should be afforded earlier and more constantly during the period of gestation. The incidence of eclampsia being largely preventable by proper diet, care should be exerted to prevent a great increase of weight. More open maternity hospitals are needed, especially to care for primiparas. Dr. Bingham suggested that the general practitioner attending a complicated labor should seek assistance of the specially trained obstetrician early instead of allowing his patient's strength to ebb while time is lost with ineffectual efforts, finally send-

ing the patient to the hospital in critical condition. He also pointed out that the unfavorable maternal mortality statistics include all deaths occurring at any period of pregnancy and include such fatalities as second month abortions.

Dr. Eugene W. Erler urged the younger physicians to take full advantage of the open maternity hospital.

Dr. Edward J. Ill made a plea for less surgical interference with labor.

Dr. Harold Tarbell emphasized the necessity of improved training of nurses in midwifery. He recommended that nurses should be required to show ability to manage a normal labor.

Dr. Carl Ill suggested a maternity center for prenatal care where a few nurses under a supervisor could care for a large group of expectant mothers, watching for danger signals by urinalysis and blood pressure determinations, and securing hospitalization before labor.

Dr. W. W. Wolfe spoke about the difficulties in the management of complications in the homes of the poorer classes.

Dr. Walter B. Mount stressed the value of standardized technic and hospital care. He advised a regulation that all patients whose period of labor exceeded a specified time should be seen in consultation by a member of the obstetric staff of the hospital.

Dr. C. V. Craster explained the efforts that were being made to clearly analyze the statistics of maternal welfare.

Other members who took part in the discussion were Drs. Mary Broadnax, S. Rubinow, David A. Kraker, H. L. Fuerstman, Louis Simonson and E. G. Wherry.

GLOUCESTER COUNTY

Henry B. Diverty, M.D., Reporter

The annual meeting of the Gloucester County Medical Society was held at the Woodbury Country Club Thursday afternoon, November 15, and officers selected to guide the body for the ensuing year.

An instructive address was made by Dr. B. F. Buzby, Jr., of Camden, on "Importance of Early Recognition of Orthopedic Conditions". Dr. Buzby was well able to discourse on this subject, as he is orthopedic physician at Cooper Hospital, Camden, and the lecture proved interesting and profitable.

The following officers were elected: President, Chester I. Ulmer, of Gibbstown; Vice-President, Harry Nelson, of Woodbury; Secretary-Treasurer, Ralph Hollinshed, of Westville; Censors, Hunter, Campbell and Stout; Delegate to Medical Society, of New Jersey, Downs, of Swedesboro; Alternates, Livingood and Buzby; Reporter, Henry Diverty; Delegates to Cape May County Medical Society, Diverty and Hunter; Delegates to Salem County Medical Society, Ashcraft, Downs and Stout; Delegates to Camden County Medical Society, Diverty, Hunter and Hollinshed; Delegates to Cumberland County Medical Society, Underwood, Buzby and Ashcraft; Delegates to Burlington County Medical Society, Hunter, Buzby and A. B. Black; Delegates to Atlantic County Medical Society, Burkett, Diverty and Pegau; Member of Nominating Committee of State Medical Society of New Jersey, Stout; Board of Trustees, Underwood, Campbell, William Brewer; Pro-

gram Committee, President Ulmer, Secretary Hollinshed and Diverty.

The guests present were: Delegates from Camden County—Drs. Emma Richardson and Howard Palm; Delegates from Cumberland County—Drs. Lyon and Sewall; Delegate from Cape May—Dr. Crowe.

Members present were: Ulmer, Gibbstown; Wood and Sinnexon, Paulsboro; Fislcr, Clayton; Ashcraft and Krusen, Mullica Hill; Buzby, Downs and Livingood, of Swedesboro; Charles and William Pedrick, Glassboro; Stout, Wenonah; Hunter and Hollinshed, of Westville; Burkett, Pitman; William Brewer, Campbell, Pegau, Underwood and Nelson, of Woodbury.

A most enjoyable luncheon was served by the steward.

HUDSON COUNTY

M. I. Marshak, M.D., Reporter

The Hudson County Medical Society and the Hudson County Bar Association met in a joint session at the Cartaret Club of Jersey City, November 7, 1928, with Dr. W. J. Sweeney and Mr. Edward A. Markley as joint presiding officers. After the business meetings of both societies were quickly ended, Mr. H. H. Corbin, of New York, read a paper on "The Jury on Trial".

Introducing his paper, Mr. Corbin said that Judge Preskauer, of New York, had characterized the civil jury as wasteful, inefficient, outworn, and as having as little reason for existence as has trial by battle; that it causes delays and that there is no practical reason for its existence. This characterization of the civil jury caused the speaker to write the paper which he was about to read.

He did not feel that mere reverence for tradition can long impede progress and that juries, like all human institutions, make mistakes. Juries, changed in personnel as they constantly are, can never become dangerous in that their decisions become precedents. That juries in civil trials are slow and impede progress is a charge which he holds untenable. Delays are not caused by juries but by other causes, such as lawyers' convenience, preparation of briefs, waiting for stenographers' minutes, etc. In jury trials the verdict is immediate, instead of delayed as is the verdict of a good many judges. Every trial counsel knows that to tire a jury by too many objections and other means is dangerous to his cause. Time is frequently lost because of lack of preparation by counsel. Juries determine facts, credibility of witnesses and reasonableness of testimony and are not tied down by traditional rules and forms. They are essentially judges of men and facts. "The best key to lay actions and mind is a lay man."

Confusion and complexities in regard to facts or motive more often exist in the minds of the jurist and lawyer than in that of juries, because these are not hampered by precedent. "Juries sense duplicity of witnesses."

The fact that the jurist sees more witnesses produces a system or rule by which he judges such witnesses, whereas the jury has no such rule and there is no habit discussion. Courts need the rugged impartiality of the jury. That juries are ignorant and unintelligible is not true. If this is a defect it is due to those who select juries and who excuse the bigger business men

from serving, and not due to the system of trial by jury.

In comparing decisions by judges to those of juries, one must bear in mind that the jury is independent. They are there not because they want to be, but because they must be. The judge has often to think of public opinion, of political mentors and votes. Among 12 men there is a sufficient diversity of bias and prejudices that compromises are effected and decisions rendered. "Compromise is the essence of civilization." The public cannot be educated to discard juries in favor of judges because of an age old fear of the probity of the magistrate and of giving him too much power. They are men and have a fair share of human frailties. The purpose of the jury is to eliminate the occasion for this distrust and create more confidence in the courts.

Dr. Otto H. Schultze, Professor of Medical Jurisprudence in the University of Cornell, and the Medical Assistant to the District-Attorney of New York County, spoke on "The Practice of Legal Medicine".

In medical practice the physician's word is law, but in the practice of legal medicine, the expert must come well qualified, and even then he will not convince the jury unless he has facts on which to base his testimony. Much of the criticism of medical expert testimony is due to the fact that improperly qualified or even unqualified physicians are allowed to testify as experts.

The attorneys should allow the expert to testify in his own way, and not ask him to testify according to his, the attorney's, line of thought. An expert witness should never attempt to spar with the attorney on cross examination. In psychiatry cases there may actually be room for differences of opinion.

Frequently the medical witness becomes as much on trial as the defendant. The great mass of material upon which the medical expert is called to testify in death cases is based on the autopsy. This must have been carefully and completely done.

If the circumstantial evidence can be made an object of actual measurement it may be of extreme value in studying the facts in a case.

Dr. Schultze finished by citing a number of very interesting and dramatic cases.

Clinical Society, North Hudson Hospital

J. Africano, M.D., Reporter

The regular monthly meeting of the Clinical Society was held at the Hospital, Tuesday, November 13, 1928, with Dr. C. L. DeMerritt as Chairman. The minutes of the last meeting were approved.

For the month of October, 1928, there were a total of 258 cases discharged as cured or improved, and 18 deaths, of which 8 were surgical, 7 medical, and 1 obstetric; there were 2 stillbirths.

Case No. 13727, one of the deaths, was briefly discussed by Dr. Tannert; this was a patient admitted October 8, with complaints of pain, tenderness and enlargement of the abdomen, vomiting, and chills, and fever. She was well until 5 months ago, when she noticed her abdomen to be getting larger—this increase in size had been rapid in the last 2 weeks. Examination revealed

the presence of a fluctuating mass in the lower abdomen, and an ovarian cyst with pelvic abscess was diagnosed. Operation was performed at once, with the finding of an ovarian cyst, size 6 x 8 in. This was removed, and following this hysterectomy was performed; while the dressing was being applied, the patient expired.

Dr. Sweeney also discussed this case; the laparotomy revealed a huge multilocular right ovarian cyst and enlarged fibroid uterus; pathologic report showed no evidences of malignancy, but the wall of the cyst showed precancerous changes; cause of death was in doubt, as the patient appeared to be in good condition just before the operation.

Dr. Pearlstein suggested the possible presence of a pyelephlebitis, and asked how long the chills and fever had been present; these had occurred only for 2 days before admission.

PRESENTATION OF PATHOLOGIC MATERIAL

Dr. Braunstein

Dr. Braunstein demonstrated several liver specimens taken from laparotomies and autopsies. The first was that removed from the patient whose case is presented by Dr. Luippold this evening—carcinoma of the liver without metastases, or any primary focus, so that a diagnosis of primary carcinoma of the liver was made; this is a rare condition.

Second specimen: Liver-cell carcinoma forming separate masses about the liver; the greenish color due to hypertrophic cirrhosis.

Third specimen: This showed cancer of the bile-duct itself, which caused an obstructive cirrhosis; these cases do not give extensive metastases.

Fourth specimen: One of hypertrophic obstructive cirrhosis due to stone, which differs very little from that due to carcinoma.

Fifth specimen: From a case of carcinomatous prostate, containing a metastasis; chronic passive congestion is present.

Sixth specimen: This showed diffuse pigmentation due to metastasis from a melanotic cancer of the choroid coat of the eye; death followed 1 yr. after enucleation of the eye.

Seventh specimen: A small piece of liver showing fatty degeneration, from an alcoholic who took an overdose of chloral hydrate.

REPORT OF THE FRACTURE WORK AT THE MASSACHUSETTS GENERAL HOSPITAL

Dr. Eckert

The Fracture Service of the Massachusetts General Hospital at Boston, Mass., recently gave a course in fractures, and presented their various treatments for fractures of the skeletal framework. The course was attended by 135 physicians representing 31 states, Porto Rico, Argentina and Canada.

The course was very intensive and included fractures of all the bones, dislocations and their reductions, amputations, and treatments of compound fractures. Their fracture treatment follows a systematic routine. Patient is admitted, general treatment instituted, if necessary. X-ray picture is immediately taken and fracture reduced under fluoroscope. A second picture is taken after reduction, and if good position has been obtained proper fixation is applied. Early reduction is advocated. Open reduction is advised when 2 attempts at closed reduction fail.

In fractures of the leg where position and alignment are good they apply their casts from and including the foot to as high as possible on the thigh. They immediately cut their casts laterally and medially to begin early motion.

In regard to skeletal traction, a great amount of this is used; the ice-tong is used for traction at the condyles of the femur; the Steinmann pin at the tibia tuberosity in femur fractures; for traction of tibia and fibula fractures, the pin is placed through the os calcis. There is little fear of infection and their statistics show very few infections.

In their open reductions they fix the bone fragments by interlocking of the fragments, by bone or ivory pegs, bone plates, Sherman plates, steel-pins, and a new pin devised by Dr. Smith-Peterson. In open operations for reduction of patella, or olecranon fractures, living tissue sutures obtained from the fascia lata are used in various ways. They advocate an overlying fascial flap, also taken from the fascia lata, to give added support.

One point is stressed to the maximum degree—early motion in the joints neighboring the fracture. Finally, a word about their end-result clinic. This has been developed by the fracture service and has advanced under coöperation of the attending and consulting surgeons. The out-patient service and hospital service patients are examined once weekly by this group, their treatment, progress and results are carefully noted, tabulated and recorded. A year after discharge the patient is asked to return to the clinic, when the fracture is x-rayed again, and the patient's ability to use the injured limb is inquired into, and the effect of the fracture on earning capacity is determined. Thus is tabulated the anatomic, economic, and the functional result.

ECLAMPSIA WITH CARDIAC COMPLICATIONS—TWO CASES OF VAGINAL CESAREAN

Dr. D'Acierno

Mrs. F. P., age 30, white, primipara, admitted Apr. 1, discharged Apr. 29, 1928. Patient at eighth month of pregnancy, complicated by mitral stenosis and regurgitation of 12 yr. duration. On admission complained of severe cephalalgia, shortness of breath, precordial pain, blurred vision and restlessness. Blood pressure 195/115. Physical examination: patient is neither orthopneic nor dyspneic; no cyanosis of lips but cheeks have a somewhat dusky hue. Eyes: pupils react normally; some injection of vessels but no definite signs of retinitis. Chest: heart enlarged, P. M. I. of apex in sixth interspace, 9 cm. from mid-sternal line. Both systolic and diastolic murmurs present over mitral area; rhythm irregular, ventricular rate 90, pulse rate 70. Abdomen: fundus uteri 3 cm. below ensiform cartilage. Vertex presentation, no engagement. Fetal heart sounds heard in the L. L. Q., rate 156. No edema of extremities. Urine on admission showed albumin 60% by volume, and a large number of granular casts and red blood cells. Blood count: Hb. 95%, wbc. 14,300, 68% polys., 32% monos. Blood chemistry: sugar, 100 mg.; creatinin 1.5 mg.; urea-N 45 mg.; uric acid 3 mg. Wassermann negative. Vaginal examination disclosed the cervix uneffaced and undilated; head ballotable.

On Apr. 2, patient had a convulsion lasting 2 min., severe in character, with tonic and clonic movements of the extremities. The convulsion was followed by coma of 20 min. duration. Mor-

phin and magnesium sulphate were used to control the convulsion, and it was decided that immediate induction of labor was indicated.

On April 3 partial dilatation of the cervix with Voorhees bag was done. An attempt at version and extraction by the Braxton-Hicks method was unsuccessful, so an anterior vaginal hysterotomy (Dührssen method) was resorted to, under gas-oxygen anesthesia. Bimanual version was done and child delivered by podalic version, following bilateral episiotomy; the child was premature, weighing 2 lb., 2 oz., and died on the following day.

On account of cardiac condition the patient was kept in the hospital until April 29, when she was discharged free of symptoms incident to pregnancy.

PREECLAMPSIA WITH CHRONIC MYOCARDITIS

Dr. D'Acierno

Mrs. R. C., admitted July 26, discharged August 12, age 46, gravida 13, para 9, pregnant 8 months. Complaints on admission were: edema of the lower extremities, frontal headache, dyspnea, hemoptysis, blurred vision and epigastric distress. Past history negative except for pneumonia in 1899 and 1918. Previous pregnancies and labors normal except for 3 miscarriages. Present complaints are of 2 mo. duration and have been steadily getting worse, especially during the last 2 weeks. Blood pressure on admission, 244/130. Physical examination: numerous areas of exudate in both retinas, vessels tortuous, a few very fine hemorrhages. Heart sounds of poor quality, systolic murmur at pulmonic area. Lungs: breath sounds harsh, some moist râles at both bases posteriorly. Abdomen: fundus uteri 5 cm. below ensiform cartilage; vertex presentation, small parts to the right, back to the left, heart sounds in L. L. Q. Vaginal examination showed a hard cervix, uneffaced, admitting tip of index finger, head not engaged, and ballotable. Extremities: slight edema of the ankles and feet. Blood chemistry on day of admission: creatinin, 1.3 mg.; urea-N, 34 mg.; uric acid, 2.7 mg. Urinalysis showed albumin to be 11% by volume, with many coarse granular and hyaline casts. Patient was treated conservatively for 2 days; however, all symptoms became aggravated, albumin increased from 11% to 23%, dyspnea became worse, heart weaker, vision failed rapidly, so that vaginal cesarean section under local anesthesia was decided upon. Following the Dührssen technic, patient was delivered of a living female child, weighing 7 lb. 12 oz. and made an uneventful recovery. On discharge, urine showed only a faint trace of albumin, blood pressure was 164/100., vision almost normal, dyspnea disappeared.

COMMENT

These cases are presented in order to show that in toxemias of pregnancy, especially in premature cases, in which the child has a poor chance of viability, and particularly in cases in which there is danger of impending convulsions and indication for immediate delivery, the vaginal cesarean section is preferable to the abdominal operation, for the following reasons: (1) It is not followed by shock. (2) Postoperative pain and abdominal distension are generally absent. (3) It is extraperitoneal and therefore eliminates possibility of peritonitis, to which this type of patient is very prone. (4) The operation

can be performed under local anesthesia, using a smaller quantity of novocain solution. (5) In subsequent pregnancies there is no danger of rupture of the uterus at site of the operative scar. (6) Hemorrhage is much less in amount and more easily controlled. (7) In the light of all recent statistics, the prognosis in cases of eclampsia not improved under conservative treatment, is much better when patients have been delivered by vaginal rather than by abdominal cesarean section.

DISCUSSION

Dr. Schulman, opening the discussion, thought the closing remarks quite interesting, but disagreed as to the choice of vaginal cesarean over abdominal. He believes that the time element enters into the choice of operation—if the condition of the patient is very poor, the abdominal cesarean can be done in 20 min., with less shock. Dr. Miller wished to know what was done about getting at the etiologic factor causing these cases to become operative, and thought the question of technic of operation was less important. Dr. Pearlstein drew attention to the presence of mitral stenosis, with hypertension in one of the cases—in these cases a relative enlargement of the heart is the result, which makes for a better circulation.

Dr. D'Acerno, in closing, cited the experiences and statistics of prominent obstetricians: Dr. Judd of the Mayo Clinic prefers the vaginal cesarean; Dr. D'Acerno heard Dr. DeLee in person state that there is no question but that the low cervical operation is the one of choice; the classic section which is being gradually supplanted by the laparotrachelotomy, here and in Europe, has a mortality of 2-10%, Dührssen's figures being 10% out of 600 cases; the time necessary for a vaginal cesarean is 20-30 min., Dr. D'Acerno states. In answer to Dr. Miller's remark concerning etiology, he stated that no doubt the study of the pathogenesis of eclampsia is an interesting one, and in fact the obstetric department, with the assistance of Drs. Braunstein and Broder, is engaged at present, in research work concerning the biologic and serologic phenomena observed in pregnant guinea-pigs following injection of serum of eclamptic patients, also in studying the effects resulting from injection of eclamptic patients with serum from a patient who has recovered from eclampsia; he sincerely hopes that some day a definite conclusion will be arrived at; in the cases presented, however, the prime indication was to terminate the pregnancies at once, in order to save the lives of the patients, and he is convinced that the operation performed was the one of choice.

CARCINOMA OF THE LIVER

Dr. Luippold

J. F., male, age 66, Scandinavian, carpenter; admitted to hospital October 17, 1928. About 10 weeks before this he developed a troublesome, persistent dry cough, with aching pains in the right lower chest, which confined him to his home. Two weeks later he noticed a yellowish discoloration of skin and sclera, and an increasing weakness which forced him to keep to his bed. For the last 3 weeks he noticed also a gradual swelling of the lower extremities, moderate distension of the abdomen, loss of appetite, constipation and clay-colored stools. Careful questioning elicited no other gastro-intestinal

symptoms. He was drowsy and slept a great part of the time.

Patient's father and mother died of "old age". There was no history of cancer or tuberculosis in the family. He was married 4 times, his first 2 wives having died of cancer. A moderate drinker with occasional excesses. His late surroundings were very filthy, and his food and its preparation bad.

Physical examination revealed a markedly wasted, jaundiced, aged man, of normal mentality; sclera deeply icteric, otherwise eyes are normal; the few remaining teeth were in an advanced stage of caries; buccal mucosa pale and of yellowish tint; slight but not conspicuous enlargement of the postcervical and supraclavicular glands; ribs very prominent, accentuating the picture of extreme emaciation. Heart sounds normal but weak. The lungs showed impaired resonance at apices and right base, with breath sounds roughened and areas of increased vocal fremitus throughout the lung. The abdomen showed a slight bulging in the R. U. Q. On palpation a definite, firm mass of regular contour could be mapped out, which occupied the whole of the usual liver area and reached downward almost to the level of the umbilicus where its lower firm, smooth edge was easily palpable; it extended transversely to the L. U. Q., but the exact degree of its extent here could not be so definitely determined. There was a moderate degree of tenderness when the mass was manipulated or position of the body was changed to bring about a movement of this part. A moderate degree of ascites was also in evidence and partly responsible for the slight protuberance of abdomen.

The laboratory reported a normal urine except for presence of bile; blood count showed a secondary anemia with 60% Hbn. and 2,750,000 R. B. C.; also a mild leukocytosis with 10,000 W. B. C., and 89% polys.; Wassermann negative; icterus index 86; Van den Bergh reaction immediate, direct; sputum negative for tubercle bacilli. X-ray examinations disclosed an enlarged liver, and an unmistakable picture of chronic pulmonary tuberculosis.

A diagnosis of carcinoma of liver was made after careful consideration of other possible conditions, especially syphilis, hypertrophic cirrhosis and benign neoplasms. The rapidity of development of what gave the impression of an enlarged liver growth, its density of structure, the age of the individual and the laboratory findings all contributed to insure the diagnosis. A careful search for primary carcinoma to which the liver growth was secondary was made but could not be found, therefore, although realizing fully the rarity of the condition, the final clinical diagnosis made was primary carcinoma of the liver. Besides the carcinoma there was present, undoubtedly, a chronic pulmonary tuberculosis. Following admission the tumor became visibly larger, the jaundice deeper and the weakness and emaciation greater; the heart weaker and irregular; and finally the patient lapsed into coma and died on the fourteenth day after admission.

TUBERCULOSIS OF THE KIDNEY

By Dr. Wilcox, from the service of Dr. Luippold

Mrs. M., white, age 54, housewife, admitted September 21 with complaint of hematemesis. Has had dyspepsia for several years and burning epigastric pain for the past 5 mo., relieved

by eating but recurring in 2-3 hr., and also relieved by sodium bicarbonate; sometimes awakes at night with pain localized 2 in. above the umbilicus over an area the size of a silver dollar; appetite was fair until 2 weeks ago, when condition became worse, and she developed nausea and vomiting of sour, white fluid. She became very weak and thinks she has lost some weight. Vomited about 1 oz. wine-colored blood on 2 occasions on the morning of admission, accompanied by substernal burning sensation. Stools black, well formed; the patient has been given bismuth. For the past 4 yr. has had frequency of urination, and has noticed blood in the urine; has had colicky pain in the left flank radiating to the bladder; swelling of feet and ankles for the past 2-3 yr. Childhood diseases: measles, mumps, pertussis, and pneumonia. Influenza 10 years ago. The uterus, tubes, and one ovary removed 20 years ago on account of "tumors". No pregnancies.

A diagnosis of duodenal ulcer and myocarditis was made. For the first 2 days, nutrient enemas, and cracked ice with bismuth and magnesium t.i.d., were given, and on the third day a Sippy diet was instituted; the patient continued to show blood in the stool, pain in the abdomen, and the urinary symptoms remained unchanged. Two weeks later starvation treatment was given for 48 hrs. A G. I. Series was attempted but proved unsuccessful on account of the patient's weakness. Tubercle bacilli were found in the urine. Pulse remained rapid, and patient complained of spells of weakness, so that Tr. Digitalis, 15 min. t.i.d., was ordered.

On Oct. 25, cystoscope revealed a bladder congested with flakes of pus adherent to the walls; the right ureteral catheter stopping at 20 cm.; urine thick and cloudy, with many pus cells and tubercle bacilli present; the left ureteral catheter inserted to the pelvis, its urine containing a few flakes, a few blood cells but no tubercle bacilli. A pyelogram showed the right kidney corrugated, with calcification in the lower pole, and absence of pelvis and calices. The P. S. P. test showed: First hour 68 c.c. excreted with 5% of the dye; second, 72 c.c. excreted with 15% of the dye.

Oct. 30: Right nephrectomy with partial ureterectomy and drainage, under general anesthesia. Kidney measured 13 x 6 x 5 cm.; the surface was nodular and lobulated. On section it was multilocular and cystic in appearance, the lobules filled with white, purulent and caseous material. Nov. 3: Tubercle bacilli found in the urine. Nov. 7: An Ewald test meal showed total acidity, 38; free HCl, 18, combined acidity, 8. Nov. 13: the patient's general condition is improving; is on a modified Sippy diet; catheterized specimen of urine shows many blood cells but no tubercle bacilli.

DISCUSSION

Dr. Luippold told how difficult it was to decide whether this was a case of tuberculosis of the kidney primarily: the patient came into the hospital with gastro-intestinal symptoms and signs predominating; as time went on, the urinary symptoms became worse and it seemed that inasmuch as a negative G. I. Series resulted, the G. U. tract was to be looked upon with more suspicion; one of the puzzles in the beginning was the presence of occult blood in the stool, whether due to an ulceration in the margin of the anus or to some condition higher up, or some

contamination from the urine; the recovery was practically uneventful, except that there were some gastro-intestinal symptoms still remaining on discharge, such as acid eructations, indigestion, etc.

Dr. Pearlstein suggested a tuberculous condition in the lower part of the intestinal tract; pain higher up might be reflex.

Dr. Hekimian, discussing the urinary symptoms, said if the symptoms were in existence for 2 yr. the possibilities were in favor of tuberculosis; this patient was told that she "had stones, which were getting smaller". The ureteral orifices were distorted, and the left was the more suspicious; the cultures showed no tubercle bacilli.

ARTHRITIS DEFORMANS

E. B., male, white, age 66, furniture repairer. Has suffered with pains in various joints, especially those of the extremities, for the past 24 yr.; in our hospital in 1921 and 1926; unable to work for the past 6 months.

Admitted April 21, complaining of pains in hands, wrists, elbows, and knees, with fever. Examination revealed a poorly nourished male, moderately ill. Both hands show chronic articular changes at the fingers, knuckles, and wrists, with Heberden's nodes, ulnar deflection, and interosseous atrophy. Knees and ankles were swollen, slightly tender, but not reddened; slight lateral motion present in right knee. Temp. range 101-102°. Heart normal, blood-pressure low. Teeth in very poor condition, and all were removed by the Dental Surgeon; negative to other foci of infection. X-ray report: Lipping and erosions of carpal bones, and phalanges, and of femur, tibia, and fibula. Urine neg.; Wassermann neg. Blood picture that of secondary anemia.

He was placed at rest in bed, and received salicylates and alkalies in large doses, local applications to joints, and phototherapy. Despite his rather intensive salicylate treatment over a period of 4 weeks, improvement was slow, and he ran some temperature, the joint pains still continued, and he could not get out of bed. He was then given intravenous injections of amiodoxyl benzoate, receiving 6 in all. He experienced no reactions from the drug and the first injection relieved his pains, and temperature became normal. After 3 injections, he had no more fever, practically no joint pains, and the swellings and deformities lessened. He was able to leave his bed, and got around first with crutches, and later without them. His general nutrition and strength improved, and he was able to walk out of the hospital.

The reason for presenting this case before the society was to draw attention to the remarkable improvement possible in a marked chronic arthritic by the use of o-iodoxybenzoic acid.

DISCUSSION

Dr. Justin emphasized that this drug did not necessarily cure, but relieved the symptoms markedly, so that the fever was abated, pain ceased, and patient was able to use his limbs and do his routine work.

Dr. Kuhlmann discussed the subject of classification of the chronic arthritides: there are 2 main classes, the atrophic, and the hypertrophic; this distinction originally made by Goldberg. They were further classified by Nichols and

Richardson, as proliferative and degenerative; here we have already 4 names, which are confusing—imagine the muddle created if more terms were to be added. Suffice to divide them first into the atrophic type, where there is an infective agent at work, in which there is temperature, swelling, inflammation of the ends of the bones, proliferation of the synovial membrane, and finally ankylosis; to this group belong the known infectious causes, as tuberculosis, gonorrhoea, syphilis, streptococci—all show infiltration and destruction of the ends of the bone, with destruction of cartilage, so that bony ankylosis results; second, there are the slowly progressive cases, which are not associated with an acute febrile disturbance—here there occurs lipping, destruction of cartilage, eburnization, but never ankylosis. There is a question as to whether some metabolic disorder is the cause. He is inclined to place this particular case in the first grouping. As to the method of action of the drug: It is a process of oxidation, the "oxy" part doing the work, analogous to the method whereby radium, iodine, x-rays, baking and graduated exercises, do the same thing—i.e., the oxidation of the tissues; or perhaps, the drug is antiseptic in addition, and it reaches the parts affected; whatever it is theoretically, we know that in most instances a marked improvement follows use of this drug.

Dr. Comora agreed as to the usefulness of the drug in a long-continued case, but not in the very acute case; in sinus affections, he has noticed the slowness and retardation of the sugar excretion in the blood, and suggests other foci of infection as well to be considered in a given case. Dr. Luippold asserted that this was clearly a case of infection, that of the so-called "rheumatic" type; in one of the first cases in which this drug was tried out, he obtained a febrile reaction, transient in character, perhaps an evidence of an oxidative process—but we have too few cases to draw definite conclusions as yet. Dr. D'Acerno proposed searching for an etiologic factor, and referred to recent work on this subject, the authors announcing *Strep. viridans* as one of the main agents causing the trouble, along with other strains.

Dr. Justin concluded by agreeing that it is a difficult matter to properly classify these affections, but believed that in the case presented he had typical findings, as the hypertrophy around the knuckles; an acute flare-up must be kept in mind, of course; the teeth of the patient were in poor condition, and were removed, and hence some of the improvement might be attributed to this; the records of the University of Michigan City Hospital show that 80% are improved; the statistics of the Boston City Hospital are similar, and 85% of the cases are said to show definite improvement, when the treatment is begun early; he has had no experience with complement-fixation, as worked by Burbank—this affords an excellent opportunity for research in itself; however, to get the proper antigen from the blood, to get the various strains from the teeth, tonsils, and other foci, would take too much of the time of the laboratory, to make it practical as a routine.

AN UNUSUAL CASE OF MYOCARDITIS

Dr. Justin

V. P., male, white, age 47, tailor. Admitted to the Surgical Service, complaining of pain in the left loin and axilla, and some dyspnea. Per-

sonal history: pleurisy at 17, occasional sore throat, Neisserian infection once. Present history: For the past month occasional pain in chest and left arm; for the past 2 weeks pain in the left loin and back, vise-like, sometimes shutting off the breath. No urinary symptoms, except burning. Chill and fever several times.

Examination revealed a well-developed and well-nourished male with T. 101°, P. 120, R. 32. Heart: no murmurs. Lungs: at the left base a dull note, diminished breath sounds, and a few râles. Abdomen: some distension, no rigidity, left kidney region tender. Urine: neg. except for a few pus cells. Blood: 12,000 leukocytes, 80% polys. Diagnosed as perinephritic abscess.

In the evening of admission day, it was noted that heart was enlarged to the left midaxillary line, rate was rapid—140, and irregular, the sounds weak, but no murmurs. B. P. 100/65. Digitalis was given. On the following day the heart condition was unimproved, and the signs at the left base the same, with low B. P. X-ray report: "Obliteration of the left costophrenic angle—fluid; kidney neg. to calculus". Paracentesis of the left chest gave a dry tap. He was then transferred to the Medical Service, complaining of sticking sensations in the cardiac region and left arm, and slight dyspnea. Temp. about 101°. No demonstrable foci of infection. The heart condition improved under digitalis, although the sounds continued weak and distant. There was still marked enlargement to the left, and obliteration of the cardiohepatic angle, suggesting pericarditis, but no friction was felt or heard. The urine showed albumin and casts. Under continued rest, and digitalis the patient's condition improved; still complained of sticking in the cardiac area and down the left arm, and seemed very weak. The chest signs were less marked.

X-ray picture at this time showed an encapsulated abscess, at the inner third left chest to the inner side of heart apex. Two days later x-ray and fluoroscopic examinations showed previous shadows disappearing. Ephedrin and I. Q. S. were given. One week later, temperature was normal, heart pain gone, the area of cardiac dullness much reduced in size, heart sound while still weak, were improved. No murmurs audible. Pulse stronger. In the following 2 weeks steady improvement took place, and patient was up about ward. He was discharged from the hospital, being able to walk out, but still showing signs of weakness of the myocardium, namely slight weakened heart sounds and some dyspnea and increase of pulse rate; on slight exertion, with quick body tiring.

This case is presented, because of its simulation of a surgical condition at the onset, the apparent escape from infection of the endocardium and valves of the heart, the anginal pains in the heart and left arm with low blood pressure, and the x-ray views.

DISCUSSION

Dr. Stein had seen a similar case, in which there were definite signs in the right chest; though there was no fever, on aspiration of the chest 250 c.c. of clear fluid, was obtained; at first quite cyanotic, the patient has now shown some improvement; his heart sounds are much better. Dr. Pearlstein believed it to be a myocarditis due to hypertension; the shape of the heart in the x-ray plates did not conform to the mitral, aortic, or other type; coronary sclerosis

with hypetension is a good possibility, leading to an infarct of the muscle—this could go on for years. Dr. Miller suggested an aneurism of the ventricle lower down—this, though rare, is to be considered. Dr. Justin agreed with the diagnosis of hypertension and myocarditis, as more fitting the symptoms and signs than an "encapsulated empyema", which had been diagnosed from the x-ray picture; he thought that the chances of improvement were poor in this case.

FULMINATING AND FATAL CASE OF FACIAL INFECTION

Dr. McLean

A white female, aged 25, was admitted August 22, suffering from an extensive cellulitis of the face. Previous history irrelevant to the present condition, except that 7 yr. before she had a boil incised on the left arm. Present condition began 5 days prior to admission, with a small furuncle within the right ala of the nose. The next day patient noticed a hard, somewhat elevated area of inflammation, about the size of a half-dollar, on the right side of the nose, which pained considerably, and caused a burning sensation. She sought medical attention and was told to go to bed. Hot wet dressings were kept continuously to this area and liquid alboline was instilled into the nostril. At this time the temperature was 101° and the pulse 110. That night the patient developed a severe chill and an increase in temperature. The next day the area of inflammation had spread downward on the right side of the face; edema appeared around the eye. A chill occurred again on the 2 following days with an increase in the temperature, averaging 104°. The inflammatory area was hard and indurated, and extended gradually farther on to the right side of the face, including the upper and lower lip and closing the right eye. The brawny induration could be felt within the mouth, and at no time could any fluctuation be noted.

Four days after onset of the illness there was a leukocyte count of 18,700, with 89% polys. On consultation with Dr. Ash, surgical intervention was advised against, and hot Burrow's solution recommended. Further laboratory examination 5 days after onset of the disease showed 18,500 whites and 89% polys.; negative blood culture, and Wassermann; x-rays revealed no sinusitis.

On the seventh day the infection had spread its brawny induration downward and posteriorly to the posterior triangle of the neck, and sternum; it involved the nose, and both lips were greatly swollen. No point of fluctuation could be felt. The temperature was 105°, pulse 120; patient delirious, and had some difficulty in breathing and swallowing. On second consultation with a surgeon chosen by the family, immediate operation was advised and undertaken with local anesthesia. An incision was made into the swollen tissue within the mouth and beneath the buccinator muscle. The finger was pushed in this incision and an effort made to find pus; none, however, being found. This cavity was then packed with gauze. Another incision of like nature was made below the angle of the jaw on the right side, without success in locating pus. A culture taken from this incision showed later a growth of *Staphylococcus albus*. The patient died about 20 minutes later.

Cause of death would apparently seem to lie between postoperative shock and embolism, superimposed upon a severe septic infection which

in itself would have caused death within a short time. It is hard to conceive of an embolus large enough to cause sudden death gaining entrance to the blood stream in this region. It would go into the circulation either through the anterior and posterior facial veins to the external jugular and thence to the heart, or through the angular and superior ophthalmic veins to the cavernous sinus. Operative treatment in this case, I believe, was not justified—especially not under local anesthesia. Bailey, of Birmingham, England, reports 4 cases of carbuncle of the upper part of the face for which he tied off the angular vein; 1 died, and 3 recovered. St. Luke's Hospital report, on this subject, stresses nonoperative procedures.

DISCUSSION

Dr. Ash was called as the first consultant in this case, and he tried hard to find a pocket of pus which would justify incision and drainage, but careful examination did not reveal any; it seemed to him that the patient was doomed from the beginning, so fulminating was the infection; this probably began from infection of the veins of the ala of the nose, upper lip, spread to the orbital veins, finally leading to the common complication—cavernous sinus thrombosis; the latter in his opinion is much more common than ordinarily spoken of and he mentioned 3 such cases in his experience, similar to that presented by Dr. McLean. Dr. Selinger explained the route of infection from the small venules about the nose, to the anterior facial vein; this partly accounts for the red nose seen so often. Dr. Kuhlmann practically exploded a bombshell by stating his views in favor of radicalism, as opposed to the more generally accepted views in favor of conservatism in treating these cases; there is no more any reason to keep away from the face in the presence of infection, and tension, which is relieved by incision, than there is elsewhere; we are kept away by esthetic reasons more than anything else; given a sharp knife, no trauma is produced; in his experience with such cases as Dr. McLean's, he preferred surgery and obtained better results. Dr. Tannert thought it the best judgment to leave these cases alone, that the tremendous shock of the operation is enough in most instances to just push the patient over the brink. Dr. Klaus stated that treatment could not be standardized, that both views mentioned are correct and that the method of treatment used must be according to each individual case, and is entirely dependent upon whether the infection is confined to the face or has already spread to the ophthalmic veins and cavernous sinus with a blood stream infection. In the former group early incision is indicated. If ligation of the angular vein is contemplated this should be done early, before the infection has spread to the orbit and cavernous sinus; certainly this operation has no place once the infection involves the cavernous sinus. In the latter group, as in the case presented by Dr. McLean, with a blood stream infection incision is not indicated but local conservative measures plus treatment of the general infection. Each case is a problem by itself and is a good example of where rare surgical judgment is required. Dr. Kerdasha asked if there was any evidence of meningitis, and if anything had been done to increase the immunity, such as a transfusion? Dr. D'Acerno was of the opinion that a polyvalent vaccine might have helped; he announced that he had

been using for some time, in cases of puerperal septicemia, general infections including pneumonia, an antistreptococcal "Stomacin", with excellent results. Dr. Tannert doubted any good arising from the administration of vaccine or serum, unless the organism causing the infection was known. Dr. McLean stated that transfusions were not good in acute infections and that often they were apt to aggravate the condition, especially in the presence of a positive blood culture.

Dr. Klaus spoke of the use of mercurochrome, citing 3 cases with positive blood cultures, one being in the hospital at present, which became negative after several injections of 5 c.c. of a 1% solution, and advised its use in repeated small doses in cases such as presented by Dr. McLean.

UNSUSPECTED EARLY CARCINOMA OF PROSTATE— PROSTATECTOMY

Dr. Hekimian

F. R., Italian, age 67, laborer, admitted to the surgical service August 8, with note indicating "strangulated hemorrhoids". Complaint: burning sensation and pain in anal region.

Patient has suffered from hemorrhoids off and on for the last 10 years. Pains became so severe 2 days ago, that he was incapacitated and sought surgical relief. With this last attack he also noticed difficulty in urination, for the first time. Physical examination negative except for the presence of extensive hemorrhoids, and moderately distended urinary bladder.

Progress notes: Palliative treatment on hemorrhoids started; 2 strangulated ones were split and sections removed. Report from the pathologist was "thrombosed hemorrhoids".

Patient had to be catheterized for acute retention twice daily; consultation was requested, and he was transferred to the Urologic Service. Venereal diseases denied. Inquiry into his urinary history revealed occasional nocturia, and that only following indulgence in alcoholic drinks. No history of retention, frequency, dysuria, or hematuria at any time.

Rectal examination showed a moderately enlarged prostate, soft, smooth and regular in outline. No nodules nor any characteristic change in consistency to suggest malignancy.

Diagnosis: Adenoma of prostate with acute congestion of prostatic malignancy.

Cystoscopic examination was not carried out in this case on account of irritated condition of the prostatic urethra, due to the original congestion which was intensified by traumatism of necessary repeated catheterizations. Prostatectomy was advised, and patient consented to the operation, although he could not see any relation between his original complaint of hemorrhoids and surgical intervention into his urinary tract.

On August 29, under local anesthesia, the first stage suprapubic cystotomy was done. No growth or calculus found in the bladder. A Pezzar catheter was introduced and drainage started.

A second blood chemistry on September 5 showed creatinine 1.6 mg. and urea-N 36 mg.

Second stage of the prostatectomy was performed under general anesthesia. Prostate was shelled out by finger enucleation without difficulty. Postoperative recovery smooth and uneventful, no complications setting in. On September 28, he was able to void with good volume

and sphincteric control. Patient was discharged as cured, with a negative urine; his incision healed perfectly; was able to pass a large stream of urine, with perfect control, on October 5.

Pathologic report: "Macroscopic: one lateral lobe measures 4x2x2.5 cm. Surface is nodular. On section it is firm and presents a yellowish granular homogenous appearance. Microscopic: section shows numerous gland acini lined with single or double rows of cuboidal epithelium. In a few places these cells are broken through the basement membrane and show malignant degeneration. Diagnosis: Adenoma of prostate, with early carcinomatous transformation."

This case emphasizes the importance of careful pathologic examination of specimens, particularly of organs which are commonly the seat of primary malignancy. This earliest stage of carcinoma is the only one which promises a cure. Unfortunately, prostatic cancer is usually in a far advanced stage when it is first seen, and then the diagnosis is not a difficult one. Correct diagnosis in this type of case is almost impossible, because there has not been enough structural change to differentiate it from a benign condition; still, this is the ideal period for radical intervention. Too conservative treatment of the prostate with signs of obstruction, in a man past middle age, is not beneficial.

DISCUSSION

Dr. DeMerrit stated how pathetic this condition is, when the diagnosis is so obscure, and the patients come only to operation because they have enlarged prostate causing obstruction, as a result because of the carcinoma per se; Youssery showed a large percentage among 100 prostatic cases, and he points out that in early carcinoma the patients are absolutely free from cachexia, and practically free from discomfort; so that the diagnosis is usually made by the pathologist.

CIRRHOSIS OF LIVER—TALMA OPERATION

Dr. Griessinger,

From the Service of Dr. Klaus

E. R., age 31, laborer, first came under my care May 20, complaining of backache, swelling of the abdomen and feet, and extreme shortness of breath. As a result of these symptoms he had been unable to work during the past 3 months, but previous to this time had enjoyed excellent health. He had been a heavy wine drinker all his life. Examination showed an elderly male, with labored breathing, pulse 90 and of good quality. Face ruddy, lips cyanotic. Heart and lungs normal. Abdomen enormously distended, a fluid-wave present due to a marked ascites. Both feet edematous. Diagnosis: portal cirrhosis.

For several weeks the patient received a strict course of medical treatment, which consisted of rest in bed, diet and medicinal measures. He improved under this treatment with a slight decrease in the ascites for a time but the ascites again increased in spite of the strict treatment, and he was admitted to the hospital June 19, for further study. His urine normal, blood examination normal, Wassermann negative. The levulose liver functional test showed a retention and impaired liver function. The P. S. P. test showed no retention. Inasmuch as the case was an early one, Dr. Klaus advised a Talma operation, as offering hope for permanent cure or for improvement and that certainly nothing could be lost by such a procedure. Operation June 27, under local

anesthesia; right rectus incision was made in the upper quadrant of the abdomen. The liver was hard, and of the hob-nailed type, considerably enlarged. There were about 2 gallons of clear serous fluid present in the abdominal cavity. The spleen was moderately enlarged. No other pathology was noted. The superior surface of the liver and the diaphragm were traumatized by rubbing with gauze sponges so as to form adhesions between these surfaces. A large section of omentum was brought out through the incision and fixed with sutures in a prepared space between the fascia and fat and the incision closed tightly in layer sutures. The omentum being placed permanently outside of the peritoneal cavity, the resulting adhesions between the omentum, fat and fascia affords a new collateral circulation between the portal and systemic circulation, thereby lessening the functional activity of the liver and likewise giving it a chance to repair its damaged cells.

Convalescence was smooth and uneventful and he was discharged July 9, with no ascites present and feeling good. Examination November 5, shows the man to be in excellent condition, having resumed his former occupation of laborer. There has been no return of his ascites and he feels perfectly well.

This case is presented because it shows that surgery offers in a certain number of cases of cirrhosis of the liver, what is considered a hopeless problem medically, a definite prolongation of life, often for many years, and especially so if the operation is done early, before structural changes occur in the heart and kidneys.

DISCUSSION

Dr. Klaus explained the procedure and purpose of the Talma operation; it is a very old operation, one not very much used at present, and not so commonly known; this case seemed to be an ideal one for such an operation, which consists of traumatizing the liver and diaphragm to form adhesions, and then bringing the omentum between the fascia and fat as described by Dr. Griessinger; the liver gets a chance to rest, and the damaged cells have a chance of repairing themselves, this in contradistinction to kidney cells, which do not repair themselves, once they are damaged. Dr. Pearlstein confirmed the fact that the liver cells become repaired, and regenerate; he gave one disadvantage of the operation, in that the blood, being sidetracked, carried with it toxic products into the general circulation, and cited a case where an alkaloid was given following the operation, causing the immediate death of the patient. Dr. D'Acerno asked if the cause of the ascites had been determined, before the Talma operation was performed, inasmuch as ascites could be produced by different causes, i.e., syphilis, tuberculosis, malaria, chronic multiple serositis, and hepatic cirrhosis; again, there are cases of cirrhosis in which there is no ascites present, as shown by Sappey; therefore, before one attempts to perform a deviation, or short-circuiting operation, one must reckon with the etiologic factor and treat it accordingly; after all, the Talma operation affords in the majority of cases only a symptomatic and temporary relief; in the case presented above, Dr. Griessinger has described the Norath modification of the Talma operation, which is certainly a simpler and a safer method. Dr. Griessinger, in conclu-

sion, said there were different methods of doing this operation; the omentum could be transplanted between the liver and the peritoneum.

MERCER COUNTY

A. Dunbar Hutchinson, M.D., Secretary

The annual banquet of the Mercer County Society was held in the Carteret Club on the evening of November 8, 1928.

Professor John E. Gill, Dean of Rider College, was the speaker for the evening, taking for his subject, "Service". Mr. Gill in his usual forceful manner recapitulated the many opportunities in which the physician may render service to his fellowmen. The remarks of Mr. Gill were most thoroughly enjoyed; his high tribute paid to the men of medicine was sincerely appreciated.

The applications for membership of Drs. R. J. Belford, of Princeton; James A. Murphy and J. N. Zimskind, of Trenton; were read and referred to the Membership Committee.

The annual meeting will be held December 12, 1928, at which time a noted speaker from a New York laboratory will address the society.

MIDDLESEX COUNTY

J. H. Rowland, M.D., Reporter

The regular monthly meeting of the Middlesex County Medical Society was held October 24 at the nurses' home of the Perth Amboy Hospital.

The meeting was called to order by Dr. Hoffman at 4:15 p. m., with about 30 members present. The minutes of the previous meeting were read and approved.

Committee Reports: Pathologic and Anatomic Committee.

Dr. Henry, Jr., reported the legal status of a pathologic society and its incorporation.

A motion made by Dr. Henry, Sr., was passed, that the pathologic and anatomic committee be instructed to form such a society, which is to be subsidiary to the Middlesex County Medical Society.

The Committee on Resolutions, on the death of Dr. A. L. Smith, reported through Dr. Hoffman. It was moved and passed that the president be authorized to have the resolutions of respect for the late Dr. A. L. Smith embossed and sent to the family.

Committee on Ethics: Upon report of Dr. Hoffman, and after consideration of it article by article, it was moved and adopted that the report be accepted as read. It was moved and passed that the Chairman be authorized to augment the Committee on Ethics according to his plan and to appoint members to cover a 5 year period.

Report of Committee on Ethics

Preamble. Recognizing that this association was formed for mutual cooperation and friendship and as a means for rendering better service to the community in which we live, we have deemed it advisable to adopt a code of ethics which shall govern our professional relations between ourselves individually and collectively, and the community.

Fees. Believing that the laborer is worthy of his hire, we mutually affirm that the agreement to observe the minimum fee list previously adopted by the individual communities in the county, be considered a part of this code of ethics.

House Calls. It shall be considered obligatory upon a physician making his first house call to ascertain by inquiry or other means whether or not another physician has made a previous call in this same illness. If he so finds, he shall immediately refuse to continue in attendance until the first physician shall have been paid and discharged, or, if the first physician has not been paid, the latter must express his willingness to relinquish the case to his successor.

Consultations. When a physician is called as consultant in a given case and consents so to act, his consultation automatically bars him from assuming charge of the case except where the consultant is to institute treatment that is not done by the physician in attendance. In this case the patient is referred to the consultant for proper treatment by the attending physician.

Office Calls. It is agreed that the ordinary office patient shall not necessarily be quizzed as to previous medical attendance as is obligatory in the case of patients confined to their homes, but it is the sense of this society that where a physician finds an office patient is under obligation to another physician he shall so inform both the patient and the physician in question.

Proprietary Preparations. It is unlawful by Federal regulations to send through the mail any medical preparation for which is claimed by the manufacturer the power to cure any specific disease. It, therefore, seems logical to us to consider any physician unethical who administers any medicinal preparation, proprietary or otherwise, or who gives any treatment with the promise of a cure in those conditions in which the medical profession at large recognizes no specific cure.

Advertising. It shall be considered unethical for a member physician to advertise in the public press or privately through the mail by means of printed matter, or in any other way, his special fitness in any line of medical work or his special material equipment therefor. This shall not be interpreted as interfering with news items in the daily press announcing a proposed course or completed course of post-graduate study, provided in such news items special fitness in any given medical line is not claimed as a result of said course.

It shall be ethical to place paid notice in the public press for change of address or telephone, suspension of, or resumption of practice, or notice of affiliation with fellow practitioner.

Public Clinics and Dispensaries. It is mutually agreed by the members of this association that the public clinics and dispensaries of this community are for the use of indigent persons only. Private cases of members of this association are not to be referred to the said dispensaries for special examination or treatment gratis or at a much reduced fee and then subsequently treated for the same illness at the usual private fee by the referring physician.

Substitutions. When a physician consents to take care of a case for a fellow member during the latter's absence from his office, it shall be considered unethical for the substituting physician to continue in attendance after return of the member to his practice or to attend such cases subsequently within a period of 6 months without the member's consent.

Gratis Service to Fellow Physicians. It is understood that members of this organization shall give their services without remuneration for their time to fellow practitioners within the County of Middlesex. Materials purchased by the attending physician or used in his care of the patient member are excepted.

Insurance Cases. It shall not be ethical for any member to take care of the risks of any insurance carrier at a fee less than the standard minimum fee for such work as established by the men in the community in which he resides.

Conduct. The spirit of the Golden Rule should be considered as the guide in conduct and as the basis for this entire code of ethics, and it shall be the active interest of all members to support actively as well as passively the good name and reputation of all members both within the profession and among the laity. The code of ethics of the American Medical Association shall be considered the basis of our special code and shall apply in all cases not specifically covered by this code of ethics.

The physician in attendance should not discuss adversely previous physicians in attendance.

Arbitration. It should be within the power allotted this committee to investigate and arbitrate all difficulties arising among its members.

Penalties. It shall be within the power allotted this committee to recommend the termination of membership in this society of any member proved to their satisfaction to be guilty of infringement of its code of ethics.

At this point Dr. Mulford, President of the State Society, was introduced by Dr. Hoffman, and he gave a short address on the problems before the state society.

Applications for membership were read: Dr. John W. McKinstry, of Jamesburg, and Dr. Emery J. Csema, of New Brunswick. These names referred to the Committee on Membership. Inquiry was made by Dr. Weber as to the disposition of the application of Dr. Samuel Hinton, of Parlin, N. J.

There being no further business, the meeting adjourned.

MONMOUTH COUNTY

F. J. Altschul, M.D., Reporter

The October meeting of the Monmouth County Medical Society was held on October 31 at the Berkely-Carteret Hotel, Asbury Park. This was the first meeting of the society since May. The President, Dr. John C. Clayton, of Freehold, presided.

The society had the honor to have present Dr. Ephraim R. Mulford, President of the New Jersey State Medical Society, who spoke briefly on the Antidiphtheria Campaign, Periodic Health Examinations, and other movements sponsored by the State Society.

Dr. Martin Reddan, of Trenton, read a paper on "Ectopic Pregnancy". He stressed the difficulty in diagnosing the unruptured ectopic gestation, and described many cases showing how difficult it was sometimes to diagnose the condition even after rupture.

Drs. L. Leonard, of Asbury Park, and Biddle H. Garrison, of Red Bank, both surgeons of experience, discussed Dr. Reddan's paper.

About 35 members were present. The meeting adjourned after a buffet supper.

PASSAIC COUNTY

John H. Carlisle, M.D., Secretary

A regular meeting of the Passaic County Medical Society was held November 8 at the Paterson Health Center. The meeting was called to order by the President, Dr. Tuers, with about 45 members and guests in attendance.

The minutes of the preceding meeting were read and approved. The following members of the Society were elected Annual Delegates to the 1929 meeting of the State Society: S. A. Levinsohn, T. E. Manly, H. H. Nye, D. R. Pal, D. Polowe, A. Shulman and L. R. Taber.

The Treasurer, Dr. N. Dingman, reported a balance to date of \$287.75 with some bills outstanding. His report was referred to the Executive Committee for audit. Dr. Mitchell then suggested that the sinking fund (about \$1322) be turned over to the Treasurer to help defray expenses for the coming year. This was referred to the Executive Committee to report at the next meeting.

The scientific program consisted of a discussion of various social problems of the community. It was opened by the Prosecutor of the County, the Honorable J. Vincent Barnitt, who spoke on the "Relation of the Physician to the Prosecutor's Office". He discussed the Physicians' responsibility to report to the Prosecutor the sources of venereal contagion, possible cases of criminal abortion, and traumatic cases which suggested the commission of a crime.

Various aspects of these problems were then discussed by Rev. A. Hamilton, Rabbi Rasin and the Rev. Howard Adair.

Several members of the society took part in the discussion, and Dr. Meloney asked the Prosecutor for a definition of "Drunkenness". The Prosecutor referred the society to the case of the "State versus Rodgers" in which the Court of Errors and Appeals rendered a clear and definite description of that condition.

Dr. Manly reported unfavorably on the advertising offer of the Paterson Evening News. This report was accepted.

After an announcement that the program for the next meeting would be a talk on "Arteriosclerotic Diseases of the Heart" by Dr. H. E. B. Pardee, of New York, the meeting adjourned.

SUSSEX COUNTY

H. D. VanGaasbeek, M.D., Reporter

The Ninety-Ninth Annual Meeting of the Sussex County Medical Society was held at the Sussex Inn, Sussex, N. J., Wednesday, November 14, at 7 p. m. After partaking of an excellent dinner, the meeting was called to order by President Morrison.

Dr. Ephraim R. Mulford, President of the State Society, was introduced and spoke at length on the objects and aims of the society for the present year, and was promised the hearty support of our society to help in this accomplishment.

Dr. Mulford was followed by Dr. McDonald, representative of the State Board of Health, who spoke on "Toxin-Antitoxin. Its Use for Immunization Against Diphtheria. How to Get People to Consent to It. Its Application to School Children and Children of Preschool Age". His address was very interesting and instructive, and it was decided informally to commence a campaign to get this before the people and to accomplish it if possible.

Next year, being our One Hundredth Anniversary, it was resolved to observe it in a fitting manner and the President was authorized to appoint a committee for that purpose.

Three new members were elected to the society: Quirk, of Newton; Drake, of Ogdinsburgh; and Scot, of Franklin.

The Superintendent of Schools of Sussex

County was present and promised his hearty support to put across the toxin-antitoxin immunization campaign in the schools.

The following members were elected officers for the coming year: President, Lamar Voorhees, Newton; Vice-President, R. White, Franklin; Treasurer, Thomas R. Pooley, Newton; Secretary, Frederick P. Wilbur, Franklin; Reporter, H. D. VanGaasbeek, Sussex; Annual Delegate, Blase Cole, Newton.

A very general discussion upon the subjects brought up by Drs. Mulford and McDonald was entered into by all the members present.

The attendance at this meeting was the largest in years.

UNION COUNTY

Summit Medical Society

W. J. Lamson, M.D., Secretary

The regular monthly meeting of the Summit Medical Society was held at Wallace Pines on Tuesday, October 30, 1928, at 8:30 p. m., with the President, Dr. Krauss, in the chair, and Dr. Bowles entertaining.

Members present: Drs. Bensley, Bowles, Berritt, Byington, Campbell, Disbrow, Eason, Hallcock, Johnston, Keeney, Krauss, Lamson, Larrabee, Macpherson, Meeker, Meigh, Milligan, Moister, Prout, Reiter, Smalley, Tator, Tidaback and Wolfe; and Drs. Jamison and Imbleau as guests.

On motion, the following resolution was unanimously passed: "The Secretary is instructed to call the attention of all members whose attendance record shows that they have been absent for 3 consecutive meetings to the By-Law which states that such absence, without cause, is not compatible with membership in the society."

The paper of the evening was read by Dr. Bowles, on "The Reticulo-Endothelial System". He presented a résumé of the present day knowledge on the subject, dwelling at length on its anatomic, physiologic and pathologic aspects, and summarizing its relationship to hemolytic icterus and pernicious anemia. He reviewed the work of Ranvier, Van Recklinghausen, Ribbert and Aschoff, and Landau. The 2 latter have given us the most detailed classification of the system, and Dr. Bowles presented a table in which Aschoff has described the anatomy of the system as being made up of the reticular cells of the spleen and lymphoid tissues, the reticulo-endothelial cells of the spleen and lymph sinuses, the bone-marrow, adrenals, Kupfer cells of the liver, the histiocytes or clasmatocytes, and the splenocytes and monocytes.

In discussion of the physiology, Dr. Bowles mentioned the blockage experiments of Gay and others which have a bearing upon immunity, hemolysis and the metabolism of lipoids and proteids, and demonstrated that these functions are now proved to be part of the activities of the system. He also showed how it has been proved that destruction of the erythrocytes is another of the duties of this particular group of cells, and that phagocytosis is another important function.

On the pathologic side, the relationship between hemolytic icterus, pernicious anemia, absorption of bacterial toxins, and excessive hemolysis on the one hand, and the reticulo-endothelial system on the other, was discussed, as well as the relation of the system to neoplasms, especially the endotheliomas.

OFFICIAL LIST

OF THE

FELLOWS, OFFICERS, PERMANENT DELEGATES AND MEMBERS

OF

THE MEDICAL SOCIETY OF NEW JERSEY

FOR THE YEAR 1928

Prepared by J. Bennett Morrison, Secretary, assisted by the Secretaries and Treasurers of the County Societies.

This List has been very carefully compiled. References have been made to the lists submitted by the County Secretaries and Treasurers, the American Medical Association Directory, the State Directory. Where these have varied, letters have been written to the individual members in order to have names and addresses correct.

If any errors in spelling, in initials, or addresses are discovered, kindly communicate with the Secretary, so that errors may not be carried on from year to year.

FELLOWS.

All persons who shall have been, or may hereafter be Presidents of the Society shall rank as Fellows and be entitled to all the privileges of delegate members. Act of incorporation, Sec. 1.

The dates represent the year of election as President. Those marked thus (*) are deceased.

*Robert McKean	1766	*James Lee	1820
*William Burnett	1767	*William G. Reynolds	1921
*John Cochran	1768	*Augustus R. Taylor	1822
*Nathaniel Scudder	1770	*William B. Ewing	1823
*Issac Smith	1771	*Peter I. Stryker	1824
*James Newell	1772	*Gilbert S. Woodhull	1825
*Absalom Bainbridge	1773	*William D. McKissack	1826
*Thomas Wiggins	1174	*Isaac Pierson	1827
*Hezekiah Stites	1775	*Jeptha B. Munn	1828
* * * * *		*John W. Craig	1829
*John Beatty	1782	*Augustus R. Taylor	1830
*Thomas Barber	1783	*Thomas Yarrow	1831
*Lawrence Van Derveer	1784	*Fitz Randolph Smith	1832
*Moses Bloomfield	1785	*William Forman	1833
*William Burnett	1786	*Samuel Hayes	1834
*Jonathan Elmer	1787	*Abraham P. Hagerman	1835
*James Stratton	1788	*Henry Van Derveer	1836
*Moses Scott	1789	*Lyndon A. Smith	1837
*John Griffith	1790	*Benjamin H. Stratton	1838
*Lewis Dunham	1791	*Jabez G. Goble	1839
*Isaac Harris	1792	*Thomas P. Stewart	1840
* * * * *		*Fred. S. Schenck	1841
*Elisha Newell	1795	*Zachariah Read	1842
* * * * *		*Abraham Skillman	1843
*Jonathan F. Morris	1807	*George R. Chetwood	1844
*Peter I. Stryker	1808	*Robert S. Simth	1845
*Lewis Morgan	1809	*Charles Hannah	1846
*Lewis Condict	1810	*Jacob T. B. Skillman	1847
*Charles Simth	1811	*Samuel H. Pennington	1848
*Matthias H. Williamson	1812	*Joseph Fithian	1849
*Samuel Forman	1814	*Elias J. Marsh	1850
*John Van Cleve	1815	*John H. Phillips	1851
*Lewis Dunham	1816	*Othniel H. Taylor	1852
*Peter I. Stryker	1817	*Samuel Lilly	1853
*Jonh Van Cleve	1818	*Alfred B. Dayton	1854
*Lewis Condict	1819	*James B. Coleman	1855

FELLOWS—Continued.

*Richard M. Cooper	1856	*George T. Welch	1892
*Thomas Ryerson	1857	*John G. Ryerson	1893
*Isaac P. Coleman	1858	*Obadiah H. Sproul	1894
*John R. Sickler	1859	*William Elmer	1895
*William Elmer	1860	Thomas J. Smith	1896
*John Blane	1861	*David C. English	1897
*John Woolverton	1862	*Claudius R. P. Fisher	1898
*Theo. R. Varick	1863	*Luther M. Halsey	1899
*Ezra M. Hunt	1864	*William Pierson	1900
*Abrabam Coles	1865	*John D. McGill	1901
*Benjamin R. Bateman	1866	*Edmund L. B. Godfrey	1902
*John C. Johnson	1867	*Henry Mitchell	1903
*Thomas J. Corson	1868	*Walter B. Johnson	1904
*William Pierson	1869	*Henry W. Elmer	1905
*Thomas F. Cullen	1870	Alexander Marcy, Jr.	1906
*Charles Hasbrouck	1871	Edward J. Ill	1907
*Franklin Gauntt	1872	*David St. John	1908
*Thomas J. Thomason	1873	*Benjamin A. Waddington	1909
*George H. Larison	1874	*Thomas H. Mackenzie	1910
*William O'Gorman	1875	*Daniel Strook	1911
*John V. Schenck	1876	Norton L. Wilson	1912
*Henry R. Baldwin	1877	*Enoch Hollingshead	1913
*Jonh S. Cook	1878	*Frank D. Gray	1914
*Alexander W. Rogers	1879	*William J. Chandler	1915
*Alexander N. Dougherty	1880	Philip Marvel	1916
*Lewis W. Oakley	1881	William G. Schauffler	1917
*John W. Snowden	1882	Thomas W. Harvey	1918
*Stephen Wickes	1883	Gordon K. Dickinson	1919
*Phanett C. Barker	1884	*Philander A. Harris	1920
*Joseph Parrish	1885	Henry B. Costill	1921
*Charles J. Kipp	1886	James Hunter, Jr.	1922
*John W. Ward	1887	Wells P. Eagleton	1923
*H. Genet Taylor	1888	Archibald Mercer	1924
*Beniah A. Watson	1889	Lucius F. Donohoe	1925
*James S. Green	1890	James S. Green	1926
*Elias J. Marsh	1891	Walt P. Conaway	1927

HONORARY MEMBERS.

*David Hosack, New York	1827	*Cyrus F. Brackett, Princeton, N. J.	1880
*John W. Francis, New York	1827	*Joseph C. Hutchinson, Brooklyn, N. Y.	1880
*John Condict, Orange, N. J.	1830	*Thomas Addis Emmett, New York	1884
*Usher Parsons, Rhode Island	1839	*Isaac E. Taylor, New York	1884
*Reuben D. Murphy, Cincinnati	1839	*D. Hayes Agnew, Philadelphia	1886
*Alban G. Smith, New York	1839	*Joseph Leidy, Philadelphia	1886
*Willard Parker, New York	1842	Frederick S. Dennis, New York	1893
*Valentine Mott, New York	1843	*John H. Ripley, New York	1893
*Jonathan Knight, New Haven	1848	Virgil P. Gibney, New York	1893
*Nathaniel Chapman, Philadelphia	1848	*William Pierson, Orange, N. J.	1894
*John H. Stephens, New York	1848	*Abraham Jacobi, New York	1896
*John C. Warren, Boston	1849	*Virgil M. D. Marcy, Cape May City	1896
*Lewis C. Beck, New York	1850	*Samuel H. Pennington, Newark, N. J.	1897
*John C. Torrey, New York	1850	Alfred A. Woodhull, Princeton, N. J.	1897
*George B. Wood, Philadelphia	1853	J. Leonard Corning, New York	1902
*Horace A. Buttolph, Short Hills, N. J.	1854	*John Allen Wyeth, New York	1903
*Ashbel Woodward, Franklin, Conn.	1861	William K. Van Reypen, U.S.N.	1903
*Thomas W. Blatchford, Troy, N. Y.	1866	Lawrence F. Flick, Philadelphia, Pa.	1903
*Jeremiah S. English, Manalapan, N.J.	1867	S. Adolphus Knopf, New York	1906
*Stephen Wickes, Orange, N. J.	1868	Albert Vander Veer, Albany, N. Y.	1907
*Samuel Oakley, Vanderpool, Albany, N.Y.	1872	Charles K. Mills, Philadelphia, Pa.	1917
*Joseph Parrish, Burlington, N. J.	1872	Richard C. Cabot, Boston, Mass.	1917
*Ferris Jacobs, Lelhi, N. Y.	1872	George W. Crille, Cleveland, Ohio	1917
*Charles A. Lindsley, New Haven, Conn.	1872	John E. Deaver, Philadelphia, Pa.	1917
*William Pepper, Philadelphia	1876	*William J. Chandler, Lawtey, Florida	1923
*S. Weir Mitchell, Philadelphia	1876	Edward J. Ill, Newark, N. J.	1925

THE MEDICAL SOCIETY OF NEW JERSEY

OFFICERS.

President, WALT P. CONAWAY.....Atlantic City
First Vice-President, EPHRAIM R. MULFORD.....Burlington
Second Vice-President, ANDREW F. MCBRIDE.....Paterson
Third Vice-President, GEORGE N. J. SOMMER.....Trenton
Corresponding Sec., WILLIAM J. CARRINGTON.....Atlantic City
Recording Secretary, J. BENNETT MORRISON.....Newark
Treasurer, ELIAS J. MARSH.....Paterson

TRUSTEES.

NORTON L. WILSON, <i>Chairman</i>Elizabeth	WELLS P. EAGLETON.....Newark
JAMES HUNTER, JR., <i>Secretary</i>Westville	ARCHIBALD MERCER.....Newark
ALEXANDER MARCY, JR.....Riverton	LUCIUS F. DONOHOE.....Bayonne
THOMAS J. SMITH.....Bridgeton	JAMES S. GREEN.....Elizabeth
EDWARD J. ILL.....Newark	WALT P. CONAWAY.....Atlantic City
PHILIP MARVEL.....Atlantic City	EPHRAIM R. MULFORD.....Burlington
WILLIAM G. SCHAUFFLER.....Princeton	ANDREW F. MCBRIDE.....Paterson
THOMAS W. HARVEY.....Orange	GEORGE N. J. SOMMER.....Trenton
GORDON K. DICKINSON.....Jersey City	ELIAS J. MARSH.....Paterson
HENRY B. COSTILL.....Trenton	WILLIAM J. CARRINGTON.....Atlantic City
First District.....Term expires, 1932	J. BENNETT MORRISON.....Newark
Second District....." " 1931	GEORGE H. LATHROPE, Newark
Third District....." " 1930	B. S. POLLAK, Secaucus
Fourth District....." " 1929	MARTIN W. REDDAN, Trenton
Fifth District....." " 1928	PAUL M. MECRAY, Camden
	J. HARRIS UNDERWOOD, Woodbury

COUNCILORS.

First District (Union, Warren, Morris and Essex Counties).....JOHN HAGERTY, Newark
 Second District (Sussex, Bergen, Hudson and Passaic Counties).....HENRY SPENCE, Jersey City
 Third District (Mercer, Middlesex, Somerset and Hunterdon Counties).....F. G. SCAMMELL, Trenton
 Fourth District (Camden, Burlington, Ocean and Monmouth Counties).....MARCUS W. NEWCOMB, Brown's Mills
 Fifth District (Cape May, Cumberland, Atlantic Gloucester and Salem Counties).....*WALTER P. GLENDON, Bridgeton

Committee on Scientific Work

R. K. HOLLINSHED, *Chairman*.....Term expires 1930
 FRANKLIN J. KELLER....." " 1928
 W. E. DARNALL....." " 1929

Committee on Public Hygiene and Sanitation

G. K. DICKINSON, *Chm.*, Jersey City.....Term expires 1929
 J. FINLEY BELL, Englewood....." " 1929
 THOMAS B. LEE, Camden....." " 1930
 HENRY SPENCE, Jersey City....." " 1930
 H. GARRETT MILLER, Millville....." " 1928
 HARVEY S. BROWN, Freehold....." " 1928

Committee on Credentials

GEORGE H. LATHROPE, *Chm.*.....Morristown
 ELIAS J. MARSH.....Paterson
 PHILIP MARVEL, JR.....Atlantic City

Committee on Honorary Membership.

THOMAS W. HARVEY, *Chm.*.....Orange
 GEORGE H. SEXSMITH.....Bayonne
 WILLIAM G. SCHAUFFLER.....Princeton

Delegates to the American Medical Association

W. BLAIR STEWART.....Term expires 1928
 JOHN F. HAGERTY....." " 1929
 B. S. POLLAK....." " 1929

Alternate Delegates

GEORGE H. SEXSMITH.....Term expires 1929
 PHILIP MARVEL....." " 1928
 S. B. ENGLISH....." " 1928

Committee on Standardization of Hospitals.

JOHN C. MCCOY, *Chm.*.....Paterson
 WILLIAM E. DARNALL.....Atlantic City
 HOWARD S. FORMAN.....Jersey City
 DAVID A. KRAKER.....Newark
 GEORGE N. J. SOMMER.....Trenton
 HENRY B. COSTILL.....Trenton
 STEPHEN QUINN.....Elizabeth

Committee on Publication

CHAS. D. BENNETT, *Chm.*, Newark.....Term expires 1930
 EDWARD J. ILL, Newark....." " 1929
 J. BENNETT MORRISON, Newark.....Ex-officio
 WALT P. CONAWAY, Atlantic City.....Ex-officio

Committee on Finance and Budget.

HARRY R. NORTH, *Chm.*.....Term expires 1933
 PAUL M. MECRAY....." " 1928
 JOHN NEVIN....." " 1929
 B. S. POLLAK....." " 1930
 H. GARRETT MILLER....." " 1931
 THOMAS W. HARVEY....." " 1932
 ELIAS J. MARSH, *Treasurer*.....Ex-officio

Committee on Program and Arrangements

MARTIN W. REDDAN, Trenton.....Term expires 1928
 WILLIAM G. SCHAUFFLER, Princeton....." " 1929
 WILLIAM D. OLMSTEAD, Atlantic City....." " 1930
 WALT P. CONAWAY, Atlantic City.....Ex-officio
 J. BENNETT MORRISON, Newark.....Ex-officio

Committee on Business.

JOHN F. HAGERTY, *Chm.*.....Newark
 JOHN NEVIN.....Jersey City
 W. BLAIR STEWART.....Atlantic City
 EMANUEL D. NEWMAN.....Newark
 JAMES B. EDWARDS.....Leonia

Committee on Standardization of Disability in Traumatic and Occupational Diseases.

JOHN F. HAGERTY.....Newark
 PAUL M. MECRAY.....Camden
 EPHRAIM MULFORD.....Burlington
 IRVING M. VANDERHOFF.....Newark
 BIDDLE H. GARRISON.....Red Bank

Committee on Welfare.

LAWRENCE H. BLOOM.....Phillipsburg
 J. C. CLAYTON.....Freehold
 A. H. COLEMAN.....Clinton
 JOSEPH G. COLEMAN.....Hammburg
 WALT P. CONAWAY.....Atlantic City
 SAMUEL A. COSGROVE.....Jersey City
 HENRY B. COSTILL.....Trenton
 RICHARD M. A. DAVIS.....Salem
 HAROLD B. DISBROW.....Lakewood
 LUCIUS F. DONOHOE.....Bayonne
 LANCELOT ELY.....Somerville
 ARTHUR J. GANLEY.....East Orange
 JAMES S. GREEN.....Elizabeth
 EDWARD GUION.....Northfield
 JOHN F. HAGERTY.....Newark
 D. LEO HAGGERTY.....Trenton
 F. R. HAUSSLING.....Newark
 BENJAMIN VAN D. HEDGES.....Plainfield
 JAMES HUNTER, JR.....Westville
 CHARLES J. LARKEY.....Bayonne
 GEORGE H. LATHROPE.....Morristown
 A. HAINES LIPPINCOTT.....Camden
 JOSEPH F. LONDRIGAN.....Hoboken
 EARL C. LYON.....Bridgeton
 ANDREW F. MCBRIDE.....Paterson
 B. C. McMAHON.....Morristown
 JOHN B. MORRISON.....Newark
 JOSEPH R. MORROW.....Oradel
 WILLIAM E. RAMSEY.....Perth Amboy
 DANIEL F. REMER.....Mt. Holly
 JOHN N. RYAN.....Passaic
 WILLIAM G. SCHAUFFLER.....Princeton
 JAMES P. SCHUREMAN.....New Brunswick
 ELBERT S. SHERMAN.....Newark
 G. VAN VORIS WARNER.....Red Bank
 CLARENCE W. WAY.....Sea Isle City

PERMANENT DELEGATES

Atlantic County

Elected

W. Blair Stewart, Atlantic City.....	1900
W. Edgar Darnall, Atlantic City.....	1903
Elisha C. Chew, Atlantic City.....	1905
Edward Guion, Atlantic City.....	1912
Edwin H. Harvey, Atlantic City.....	1915
William J. Carrington, Atlantic City.....	1921
Samuel Barbash, Atlantic City.....	1924
Theodore Senseman, Atlantic City.....	1924
David Berner, Atlantic City.....	1924

Bergen County

James W. Proctor, Englewood.....	1910
John E. Pratt, Dumont.....	1910
Frederick S. Hallett, Hackensack.....	1915
Joseph Payne, Midland Park.....	1919
Alva A. Swayze, Hackensack.....	1919
Alfred W. Ward, Demarest.....	1925
George L. Edwards, Bogota.....	1925
Samuel T. Hubbard, Hackensack.....	1925
Frank Freeland, Hackensack.....	1926
George H. Ward, Englewood.....	1926
J. Finley Bell.....	1926

Burlington County

George T. Tracy, Beverly.....	1915
Marcus W. Newcombe, Brown's Mill.....	1915
D. F. Remer, Mt. Holly.....	1924
Emlin P. Darlington, New Lisbon.....	1926

Camden County

William H. Iszard, Camden.....	1899
Alexander MacAlister, Camden.....	1903
John F. Leavitt, Camden.....	1908
Henry H. Davis, Camden.....	1909
Howard F. Palm, Camden.....	1909
William A. Westcott, Berlin.....	1915
A. Haines Lippincott, Camden.....	1919
Edward B. Rogers, Collingswood.....	1921
William B. Jennings, Haddonfield.....	1922
Thomas B. Lee, Camden.....	1922
Paul M. McCray, Camden.....	1922

Cape May County.

Randolph Marshall, Tuckahoe.....	1908
Clarence W. Way, Sea Island City.....	1926

Cumberland County

H. Garrett Miller, Millville.....	1915
*Walter P. Glendon, Bridgeton.....	1921
Charles M. Gray, Vineland.....	1924
John H. Moore, Bridgeton.....	1925

Essex County

*James T. Wrightson, Newark.....	1898
*Charles F. Underwood, Newark.....	1900
Charles D. Bennett, Newark.....	1900
William B. Graves, East Orange.....	1900
George B. Philhower, Nutley.....	1903
Theodore W. Corwin, Newark.....	1903
Edward Staehlin, Newark.....	1903
William Buerman, Newark.....	1910
Linn Emerson, Orange.....	1910
Henry J. F. Wallhauser, Newark.....	1912
John F. Hagerty, Newark.....	1912
William H. Hicks, Newark.....	1912
Elbert S. Sherman, Newark.....	1912
Walter S. Washington, Newark.....	1913
E. Zeh Hawkes, Newark.....	1914
John B. Morrison, Newark.....	1915
Christopher C. Beling, Newark.....	1915

Essex County—Continued.

Ralph H. Hunt, East Orange.....	1915
John F. Condon, Newark.....	1915
Emanuel D. Newman, Newark.....	1915
Eugene W. Murray, Newark.....	1915
Theodore Teimer, Newark.....	1917
Mefford Runyon, South Orange.....	1917
Frank W. Pinneo, Newark.....	1917
Samuel E. Robertson, Newark.....	1919
Francis H. Haussling, Newark.....	1919
Elmer G. Wherry, Newark.....	1922
James H. Lowrey, Newark.....	1922
David A. Kraker, Newark.....	1922
Ambrose F. Dowd, Newark.....	1922
Edward W. Sprague, Newark.....	1922
Chauncey B. Griffiths, Newark.....	1922
Charles F. Baker, Newark.....	1922
Richard H. Dieffenbach, Newark.....	1922
Charles L. Ill, Newark.....	1922
Henry C. Barkhorn, Newark.....	1922
Joseph J. Smith, Newark.....	1922
Edwin Reissman, Newark.....	1922
Guy Payne, Overbrook.....	1922
George Blackburn, East Orange.....	1922
William O'G. Quimby, Newark.....	1924
Robert H. Rogers, Newark.....	1924
August J. Mitchell, Newark.....	1924
Alfred Stahl, Newark.....	1924
William Gauch, Newark.....	1924
Frank Devlin, Newark.....	1924
Richard D. Freeman, South Orange.....	1925
Paul H. Hosp, Newark.....	1925
Clarence R. O'Crowley, Newark.....	1925
H. Roy Van Ness, Newark.....	1925
Harrison S. Martland.....	1926
A. W. Bingham, East Orange.....	1927
H. B. Orton, Newark.....	1927
Ernest Gennell, Newark.....	1927
Harry A. Comando, Newark.....	1927
E. A. Snively, Newark.....	1927

Gloucester County

James H. Underwood, Woodbury.....	1920
S. H. Ashcraft, Mullica Hill.....	1924
William Brewer, Woodbury.....	1924

Hudson County

Joseph M. Rector, Jersey City.....	1900
George E. McLaughlin, Jersey City.....	1900
Talbot R. Chambers, Jersey City.....	1900
Henry H. Brinkerhoff, Jersey City.....	1910
Henry Spence, Jersey City.....	1910
Arthur P. Hasking, Jersey City.....	1911
Immanuel Pyle, Jersey City.....	1912
Charles H. Purdy, Jersey City.....	1912
George M. Culver, Jersey City.....	1912
Chas. H. Finke, Jersey City.....	1913
Henry J. Spaulding, Weehawken.....	1915
William L. Pyle, Jersey City.....	1916
John Nevin, Jersey City.....	1919
Stanley R. Woodruff, Bayonne.....	1919
George H. Sexsmith, Bayonne.....	1922
Samuel G. Cosgrove, Jersey City.....	1922
Fred J. Quigley, Town of Union.....	1922
Berth S. Pollak, Jersey City.....	1922
Oscar C. Frundt, Jersey City.....	1922
Charles B. Kelley, Jersey City.....	1922
William J. Sweeney, Town of Union.....	1922
Leo A. Koppel, Jersey City.....	1924
Joseph Koppel, Jersey City.....	1924
H. J. Perlberg, Jersey City.....	1924
Reeve L. Ballinger, Arlington.....	1924
G. W. King, Laurel Hill.....	1924

PERMANENT DELEGATES—Continued

Hudson County—Continued.

H. T. von Deesten, Hoboken.....	1924
G. V. Niemeyer, Union City.....	1925
Wm. L. Yeaton, Hoboken.....	1925
E. J. Luippold, Weehawken.....	1925
Charles J. Larkey, Bayonne.....	1925
Joseph P. Londrigan, Hoboken	1926
Frank Bartone, Jersey City	1927
Donald Miner, Jersey City	1927
A. E. Jaffin, Jersey City	1927

Hunterdon County

Samuel B. English, Glen Gardner.....	1924
L. G. Salmon, Lambertville.....	1925
A. H. Coleman, Clinton	1927

Mercer County

Charles F. Adams, Trenton.....	1900
Nelson B. Oliphant, Trenton.....	1915
Henry A. Cotton, Trenton.....	1917
Charles J. Craythorn, Trenton.....	1920
William A. Clark, Trenton.....	1922
George N. J. Sommer, Trenton.....	1922
James J. McGuire, Trenton.....	1922
William L. Wilbur, Hightown.....	1925
David C. Ackley, Trenton.....	1925
Martin W. Reddan, Trenton.....	1925
Harry R. North, Trenton.....	1925
Horrace D. Bellis, Trenton	1926

Middlesex County

A. Clark Hunt, Metuchen.....	1909
Edgar Carroll, Dayton.....	1914
Arthur L. Smith, New Brunswick.....	1915
Frank C. Henry, Perth Amboy.....	1920
John G. Wilson, Perth Amboy	1927
J. B. Schureman, New Brunswick.....	1927

Monmouth County

Harry E. Shaw, Long Branch.....	1915
Harry W. Ingling, Freehold.....	1924
Harry B. Slocum, Long Branch.....	1924
Clarence M. Trippe, Asbury Park.....	1924
Geo. Van V. Warner, Red Bank.....	1924
W. K. Campbell, Long Branch.....	1924
Harvey S. Brown, Freehold.....	1928

Morris County

Cuthbert Wigg, Boonton.....	1899
Frederick W. Flagge, Rockaway.....	1901
Alfred A. Lewis, Morristown.....	1903
Henry W. Kice, Wharton.....	1919
Leonidas A. Mial, Morristown.....	1921
Clifford Mills, Morristown.....	1923

Ocean County

Ralph R. Jones, Toms River.....	1910
V. M. Disbrow, Lakewood	1924

Passaic County

Charles H. Scribner, Paterson.....	1900
John T. Gillson, Paterson.....	1900
Andrew F. McBride, Paterson.....	1900
Frederick F. C. Demarest, Passaic.....	1908
Francis H. Todd, Paterson	1910
Joseph V. Bergin, Paterson.....	1911
Henry H. Lucas, Paterson.....	1914
John C. McCoy, Paterson.....	1915
John S. Yates, Paterson.....	1916
George E. Tuers, Paterson.....	1920
William Neer, Paterson.....	1920
A. Ward Van Riper, Passaic.....	1921
William Spickers, Paterson.....	1922
Thomas A. Clay, Paterson.....	1922
John N. Ryan, Passaic.....	1924
Jacob Roemer, Paterson.....	1924
Henry Cogan, Paterson.....	1924
Henry H. Brevoort, Lodi	1926

Salem County

Richard M. A. Davis, Salem.....	1923
David W. Green, Salem.....	1924

Somerset County

Aaron L. Stilwell, Somerville.....	1900
David Fairchild Weeks, Skillman.....	1920
Lancelot Ely, Somerville.....	1924
Runkin F. Hegeman, Somerville.....	1924

Sussex County

Frederick P. Wilbur, Franklin Furnace..	1912
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Union County

Stephen T. Quinn, Elizabeth.....	1911
Joseph B. Harrison, Westfield.....	1915
Charles H. Schlichter, Elizabeth.....	1920
Thomas P. Prout, Summit.....	1922
Arthur Stern, Elizabeth.....	1922
Horace L. Livengood, Elizabeth.....	1923
Alvin R. Eaton, Elizabeth.....	1924
William J. Lamson, Summit.....	1924
Jacob Reiner, Elizabeth.....	1925
P. Du Bois Bunting, Elizabeth	1926
George Banker, Elizabeth	1927
Milton A. Shangle, Elizabeth	1927
George Strickland, Roselle	1927
B. V. Hedges, Plainfield	1927
George Laird, Elizabeth	1927
John Runnels, Scotch Plains	1927

Warren County

G. Wyckoff Cummins, Belvidere.....	1903
Louis C. Osmun, Hackettstown.....	1919
Charles B. Smith, Washington.....	1924

MEMBERSHIP OF COUNTY MEDICAL SOCIETY

Comprising the MEDICAL SOCIETY OF NEW JERSEY 1928

ATLANTIC COUNTY. (1)

Society organized June 7, 1880. Meets second Friday of each month. Annual meeting in December.

President.

Wescott, William C., Del. & Pac. avs., Atl. City

Vice-President.

Mason, James H., Ind. & Pac. avs., Atlantic City

Secretary and Treasurer.

Marcus, Joseph H., 101 So. Newton av., Atl. City

Reporter.

Davidson, Harold, 131 S. Ill. av., Atlantic City

Censors.

Carrington, Wm. J., Atlantic City
Bernier, David, 2817 Pacific av., Atlantic City
Andrews, Clarence L., Atlantic City

Allman, David B., 104 St. Chas. pl., Atlantic City
Axilrod, M. H., 2620 Pacific av., Atlantic City
Andrews, Clarence L., 101 So. Ind. av., Atl. City
Barbash, Samuel, 1920 Pacific av., Atlantic City
Bartlett, Clara K., 4301 Atlantic av., Atlantic City
Basset, N. L., 117 S. Illinois av., Atlantic City
Bates, Chas. A., 919 S. Main, Pleasantville
Bateman, Sydney, 10 S. Morris av., Atlantic City
Beckwith, J. T., 33 S. Indiana av., Atlantic City
Beir, I. R., Haverford Apts., Atlantic City
Bennett, Francis W., 117 S. Illinois av., Atl. City
Bernier, David, 2817 Pacific av., Atlantic City
*Bew, Richard, 1217 Pacific av., Atlantic City
Bewley, L. H., 1209 Pacific av., Atlantic City
Bossert, Chas. L., 709 Pacific av., Atlantic City
Boysen, Theophilus, Egg Harbor
Bradley, Robt. A., 101 So. Ind. av., Atlantic City
Brown, J. C., 101 So. Indiana av., Atlantic City
Burrows, Garfield C., 118 States av., Atlantic City
*Canning, C. H., Manheim Apts., Atlantic City
Carrington, William J., 905 Pac. av., Atlantic City
Charlton, C. C., 124 S. Illinois av., Atlantic City
Chesler, Maurice., Conn. & Pac. avs., Atlantic City
Chew, Elisha C., 603 Pacific av., Atlantic City
Clark, S. Worth, 152 S. N. Carolina av., Atl. City
Conaway, Walt P., 1723 Pacific av., Atlantic City
Coward, Edwin H., 1423 Pacific av., Atlantic City
Corson, Filbert R., 3529 Pacific av., Atlantic City
Crane, Bernard, 306 Pacific av., Atlantic City
Cuskaden, A. D., 5902 Ventnor av., Ventnor City
Dalton, S. Eugene, 124 S. Illinois av., Atlantic City
Darnall, Wm. Edgar, P.O. Box 1126, Atlantic City
Davis, Byron G., 1500 Pac. av., Atlantic City
Davis, W. Price, Morton Hotel, Atlantic City
Davidson, Harold S., 131 S. Ill. av., Atlantic City
Dunlap, Thos. G., 47 S. Virginia av., Atlantic City
Durham, Royal E., Manheim Apts., Atlantic City
Ewens, Arthur E., 3600 Pacific av., Atlantic City
Fischer, John S., 20 S. Jackson av., Atlantic City
Fish, Clyde M., Washington av., Pleasantville
Frank, Myrtle G., P.O. Box 62, Egg Harbor
Frisch, Frederick, 3603 Pacific av., Atlantic City
Fowler, R. M., Jr., 24 N. Indiana av., Atlantic City
Fox, William W., 101 S. Indiana av., Atlantic City
Garrabrant, Clarence, 19 N. Penn. av., Atl. City
Gehring, Gus P., 2439 F st., San Diego, California

Gorson, Samuel F., 2005 Pacific av., Atlantic City
Grier, Robert M., P.O. Box 424, Pleasantville
Guion, Edward, Northfield Asylum, Northfield
Haley, Mark J., 3 N. Granville av., Margate City
Harley, H. L., 1714 Pacific av., Atlantic City
Harvey, Edwin H., 20 N. Florida av., Atl. City
Hess, Louis E., E. Bolton av., Absecon
Holt, E. Z., Children's Seashore Home, Atl. City
Hudson, W. J., P.O. Box 343, Pleasantville
Hyman, Charles, 1925 Pacific av., Atlantic City
Ireland, Milton S., 23 S. California av., Atl. City
Irvin, John S., 1910 Pacific av., Atlantic City
James, Henry Carroll, May's Landing
Johnson, Earl V., 3200 Pacific av., Atlantic City
Kaighn, Chas. B., 905 Pacific av., Atlantic City
Kilduffe, Robert A., 104 S. Roosevelt pl., Atl. City
Kremens, Maxwell B., 711 Pacific av., Atlantic City
Lawrence, Henry R., 711 Pacific av., Atlantic City
Leonard, Isaac E., 2842 Atlantic av., Atlantic City
Madden, Leland Sanford, Pleasantville
Mackler, Louis, 16 S. Maryland av., Atlantic City
Marcus, Joseph H., 101 S. Newton av., Atl. City
Marshall, Jos. C., 1517 Pacific av., Atlantic City
Martin, William, Ryanhurst Apts., Atlantic City
Marvel, Philip, Jr., 101 S. Ind. av., Atlantic City
Marvel, Philip, 101 S. Indiana av., Atlantic City
Massey, John F., 20 S. Newport av., Ventnor
Mason, Jas. H., 3d, Ind. & Pac. avs., Atlantic City
McGeehan, S. M., Ryanhurst Apts., Atlantic City
McGivern, Chas. S., 101 S. Ind. av., Atlantic City
MeVey, James C., 2907 Pacific av., Atlantic City
Miller, D. J. M., Calif. & Pacific av., Atlantic City
Mullerschoen, George J., Oakland av., Ventnor
*North, James, 6 N. Haverford av., Margate
Olmstead, W. D., 1920 Pacific av., Atlantic City
Pennington, John, 101 S. Indiana av., Atlantic City
Pennington, Geo. P., 12 S. Chelsea av., Atl. City
Pilkington, Albert, Amst'dam Apts., Atlantic City
Poland, Geo. A., 206 Verona av., Pleasantville
Poland, Joseph, 1904 Pacific av., Atlantic City
*Podolski, L. A., Seaside Hotel, Atlantic City
Quinn, Norman J., 3303 Pacific av., Atlantic City
Reed, Hilton S., 101 S. Indiana av., Atlantic City
Reyner, Daniel C., 2703 Pacific av., Atlantic City
Reynolds, Walter, 27 S. Indiana av., Atlantic City
Rosenblatt, Sidney, 1920 Pac. av., Atlantic City
Salasin, Samuel, 511 Pacific av., Atlantic City
Scanlan, David Ward, 15 S. Illinois av., Atl. City
Scott, Karl M., 101 S. Indiana av., Atlantic City
Scott, George, 9 S. Penn. av., Atlantic City
Senseman, Theo., 3600 Pacific av., Atlantic City
Sinkinson, Chas. D., Jr., Prof. Arts Bldg., Atl. City
Shenfeld, Isaac, 338 Pacific av., Atlantic City
Shimer, A. Burton, 606 Pacific av., Atlantic City
Shivers, Chas. H., Sr., 121 Ill. av., Atlantic City
Shivers, C. H. de T., 121 S. Ill. av., Atlantic City
Shore, Ernest L., 28 S. Conn. av., Atlantic City
Silvers, Homer I., 16 N. Suffolk av., Atlantic City
Spencer, Geo. F., 101 S. Indiana av., Atlantic City
Stalberg, Isaac, 24 S. New Hampshire av., Atl. City
Stalberg, Samuel, 1109 Pacific av., Atlantic City
Stern, Samuel, 2815 Pacific av., Atlantic City
Stewart, W. Blair, N. Car. & Pac. avs., Atl. City

ATLANTIC COUNTY.—Continued.

Stewart, Walter B., 8 N. Tallahassee av., Ventnor
 Souder, Louis R., 5 S. Victoria av., Ventnor City
 Subin, Harry, 1904 Pacific av., Atlantic City
 Surran, Carl M., 132 S. Kentucky av., Atl. City
 Taggart, Thos. D., 25 S. Indiana av., Atlantic City
 Torrey, Eugene, 8. N. Providence av., Atl. City
 Townsend, Mary E., Box 703, Atlantic City
 Uzzell, Edward F., 2703 Pacific av., Atlantic City
 Walker, L. M., 1329 Pacific Pacific av., Atl. City
 Weiner, Samuel E., 904 Pacific av., Atlantic City
 Westcoat, A. S., 615 Pacific av., Atlantic City
 Westcott, Wm. C., Del & Pac. avs., Atlantic City
 Westney, Alfred W., 3005 Pac. av., Atlantic City
 Williams, Raymond A., 2 S. Wissahickon av., At. C
 Winn, Samuel L., 1902 Pacific av., Atlantic City
 Wilson, Lawrence A., Absecon, N. J.
 Woolbert, Roy, Del. & Pac. avs., Atlantic City
 Wright, Elizabeth T., 28 N. Vermont av., Atl. City

Associate Members.

Barab, Barney B., D. D. S., Atlantic City
 Filer, Boynton B., 1900 Pac. av., Atlantic City

Fitzsimons, O. L., 36 S. Penna. av., Atlantic City
 Mally, Manuel J., D. D. S., Atlantic City
 Rulon, Walter A., 101 S. Indiana av., Atlantic City
 Steigerwald, Clarence S., Jackson av., Ventnor

Honorary Members.

Joy, J. Addison, E. Hampton, Mass.
 Coplin, W. M. L., Atlantic City

Resigned

Porteous, Edward
 Ritter, Henry R.
 Roop, William O.
 Sheen, Rodman

Received on Transfer

Haley, M. J., from Lackawanna Medical So., Penn.

Number of members and basis of representation, 125.

100 per cent. paid up March 8, 1928.

*Deceased.

BERGEN COUNTY. (2)

Society organized February 28, 1854. Meets second Tuesday in each month. Annual meeting second Tuesday in January.

President.

McCormack, Frank C., Englewood

Vice-President.

Levitas, George, Westwood

Secretary.

Clarke, Edward W., W. Englewood

Treasurer.

Sarla, M., Hackensack

Reporter.

Snedecor, S. T., Hackensack

Censors

The President, Secretary and Treasurer

Alexander, Samuel, Park Ridge
 Armstrong, Samuel E., Rutherford
 Barnes, William J., Englewood
 Bell, J. Finley, Englewood
 Black, LeRoy, Rutherford
 Bleasby, LeRoy, Garfield
 Brundage, Philip E., Cresskill
 Buckley, Charles F., Edgewater
 Caldrony, Thomas L., Ridgefield Park
 Clarke, Edward W., West Englewood
 Cochrane, Cleland D., Closter
 Cone, Ralph S., Westwood
 Connor, Thomas F., Bogota
 Conrad, Edgar K., Hackensack
 Corn, David, Ridgefield Park
 Crandall, John K., Fort Lee
 Cropsey, Charles D., Rutherford
 Curtis, Donald, Hackensack
 Dayton, S. T., Englewood
 Denig, Ralph D., Hackensack
 Dezer, Charles N., Englewood
 Dilger, F. G., Cliffside
 Edwards, George L., Bogota
 Edwards, James B., Leonia
 Essertier, Edward P., Hackensack
 Farmer, Vincent, Hackensack
 Fielding, William M., Allendale
 Finke, George W., Hackensack
 Finke, John H. D., Hackensack
 Fisher, Percy C., Ridgewood
 Fox, James W., Hillsdale

Freeland, Frank, Hackensack
 Frobisher, Hamilton B., Teaneck
 Garrett, Harry S., Park Ridge
 Gilady, Ralph, Hackensack
 Gillett, H. E., Ramsey
 Gnasso, E. R., Fort Lee
 Goldberg, David, Westwood
 Greenberg, Lewis, Lodi
 Grimes, Jesse R., Dumont
 Hallet, Frederick S., Hackensack
 Halperin, H., Englewood
 Helff, J. R., Teaneck
 Hoheb, A. S., Rutherford
 Hubbard, Samuel T., Hackensack
 Huff, Edmund N., Englewood
 Irwin, J. H., Englewood
 James, W. L., Englewood
 Jukofsky, I. D., Ridgefield Park
 Keir, Floyd E., Englewood
 Kenyon, H. M., Bergenfield
 Kilts, W. S., Bogota
 King, Chester A., Oradell
 Knapp, Richard E., Hackensack
 Knox, Charles A., Ridgefield Park
 Knox, Harriet L., Hackensack
 Levitas, George W., Westwood
 Lewis, Alice B., Ridgewood
 Liva, Arcangelo, Rutherford
 Littwin, Charles, Palisade
 Lynn, John V., Ridgefield
 MacKellar, James M., Tenafly
 McCormack, Frank C., Englewood
 McDannalds, William S., Tenafly
 McFeeley, Percy R., Bogota
 McIlvaine, Wm. E., Ridgefield Park
 Magner, John J., Hackensack
 Meyer, Edward H., Mahwah, N. J. (Sufferin, N.Y.)
 Morrow, Jos. R., Isolation Hospital, Oradell
 O'Brien, Paul, East Rutherford
 Ogden, William E., Ridge Road, Rutherford
 Pallen, Conde de S., Rochelle Park
 Payne, Joseph, Midland Park
 Perham, Roy G., Hasbrouck Heights
 Phillips, Walter, Englewood
 Pitkin, George P., Bergenfield
 Prather, John W., Dumont
 Protzman, Thomas B., Englewood
 Proctor, James Wm., Englewood
 Prout, William B., Teaneck

BERGEN COUNTY.—Continued.

Pullen, Guy F., Leonia
 Reid, Erwin W., Garfield
 Richardson, Charles A., Closter
 Ruch, Louis, Englewood
 Ruch, Valentine, Englewood
 Sarla, Michael, Hackensack
 Sawyer, E. E., 336 1st st., Hackensack
 Sealey, H. J., Dumont
 Scott, R. T., Palisade
 Snedecor, S. T., Hackensack
 Spiegelglass, Abraham B., Hackensack
 Stevenson, George S., Hasbrouck Heights
 Stone, Chester T., Ridgewood
 Sullivan, Michael J., Englewood
 Swayze, Alvah A., Hackensack
 Taylor, Harold W., Englewood
 Teeter, John N., Englewood
 Tomkins, William, Ridgewood
 Trossback, Herman, Bogota
 Tyson, Francis B., Leonia
 Van Dyke, Joseph S., Palisade Park
 Walsh, T. M., Hasbrouck Heights
 Ward, Alfred W., Demarest
 Ward, George Harold, Englewood
 Warren, Charles B., Bergenfield
 Webb, Wilson D., Hackensack
 Westerhoff, Peter D., Midland Park

Whitman, Loyd B., Bergenfield
 Williams, W. C., Rutherford
 Willis, Benedict P., Rutherford
 Wiloughby, William F., Englewood
 Wolowitz, Harry B., Hackensack
 Wurts, Margaret M., Englewood
 Wyler, Max, Fort Lee

Honorary Members.

Calhoun, Charles, Rutherford, N. J.
 *Haring, John J., Toledo, O.
 Pratt, John E., Dumont
 Rodman, Robert W., Lyndhurst, N. J.

Received on Transfer.

Barnes, Wm. J., Englewood
 Stevenson, George, Hasbrouck Heights
 Worcester, G. F., Englewood

Resigned.

Hunt, J. R.

Number of members and basis of representation, 116.

100 per cent of membership in good standing
 March 8, 1928.

*Deceased

BURLINGTON COUNTY. (3)

Society organized May 19, 1829. Meets second Wednesday in January, April, June and October. Annual meeting in October.

President.

Anderson, Richard D., Burlington

Vice-President.

Bauer, Harry W., Palmyra

Secretary and Treasurer.

Tracey, George T., Beverly

Reporter.

Downes, Roscius I., Riverside

Censors.

Brick, Benjamin K., Marlton
 Mulford, E. R., Burlington
 Ulmer, D. H., Moorestown

Anderson, Richard D., Burlington
 Baird, David, Jr., Florence
 Bauer, Harry W., Palmyra
 Brick, Benjamin K., Marlton
 Conroy, John C., Burlington
 Curtis, Howard C., Moorestown
 Darlington, Emlen P., New Lisbon
 Davis, Jacob M., Burlington
 Downs, Roscius I., Riverside
 Dubell, John E., Columbus
 Fahrenbruch, F. D., Mt. Holly
 Geary, Russell D., Riverside
 Gordon, Altamont L., Burlington
 Haines, Edgar J., Medford
 Haines, J. Ridgeway, Mt. Holly
 Haldeman, Robert E., Mt. Holly
 Hollingshead, Lyman B., Pemberton
 Hollingshead, I. W., 123 S. 18th st., Phila., Pa.
 Hornberger, J. Howard, Roebing

Hunter, Edward R., Delanco
 Kuder, Joseph M., Mt. Holly
 Le Favor, Dean H., Palmyra
 Longsdorf, Harold E., Mt. Holly
 Lore, Andrew P., Palmyra
 Love, Elizabeth F., Moorestown
 Marcy, Alexander, Jr., Riverton
 McDonnell, G. E., Mt. Holly
 Mendenhall, Clinton D., Bordentown
 Metzger, Emma P. W., Riverside
 Mills, Charles S., Riverton
 Mulford, Ephraim R., Burlington
 Newcombe, Marcus W., Brown's Mills
 Powell, Benjah B., Moorestown
 Reisinger, P. B., Roebing
 Remer, Daniel F., Mt. Holly
 Rodman, E. Warren, Beverly
 Rogers, Harry L., Riverton
 Schisler, Milton M., Florence
 Scott, Parry M., Beverly
 Small, E. Lester, Medford
 Smith, Andrew M., Mt. Holly
 Stokes, Joseph, Moorestown
 Stokes, S. Emlen, Moorestown
 Thorne, Nathan, Moorestown
 Tracey, George T., Beverly
 Ulmer, David H. B., Moorestown
 Wells, William C., Delanco
 Wilkinson, George H., Moorestown

Honorary Member.

Stoddard, Francis J., Rydal, Pennsylvania

Number of members and basis of representation, 48.

100 per cent. paid up March 8, 1928.

CAMDEN COUNTY. (4)

Society organized August 14, 1846. Meets second Tuesday of every month. Annual meeting in October.

President.

Madden, Theo. W., West Collingswood

Vice-President.

Day, Grafton E., Collingswood

Secretary.

Lee, Thomas B., 527 Penn. av., Camden

Treasurer.

Buzby, B. Franklin, Jr., 414 Cooper st., Camden

Reporter.

Schall, R. E., Camden

Historian.

Bentley, David S., Jr., Camden

CAMDEN COUNTY.—Continued.

Censors.

Cramer, Alfred D., Jr., Camden
 Davis, Henry H., Toms River
 Madden, Theodore W., Collingswood
 Marcy, John W., Merchantville
 Pratt, William H., 516 Cooper st., Camden

Baker, Maurice E., 1149 Kaighn av., Camden
 Barb, K. B., Kaighn & Princess avs., Camden
 Barrett, Wesley J., 517 Cooper st., Camden
 Bailey, Wilson G., 512 Broadway, Camden
 Bardsley, Chester A., Park av., Laurel Springs
 Becker, C. Fred, 620 Benson st., Camden
 Bentley, David F., Jr., 403 Cooper st., Camden
 Brennan, John P., 511 State st., Camden
 Bush, Ralph K., 131 E. Park av., Merchantville
 Buzby, B. Franklin, Jr., 414 Cooper st., Camden
 Capuano, Giacinto, 829 S. 4th st., Camden
 Casselman, Arthur J., 317 Penn st., Camden
 Clark, Ernest B., Westmont
 *Clement, Edg., 124 King's High'w'y, W. Haddonfield
 Clement, Lavina B., 124 King's H'h'w'y, W. H'd'f'ld
 Collier, Martin H., Camden Co. Hosp., Lakewood
 Conoly, J. H., 300 Monmouth st., Gloucester
 Conoly, L. N., 601 Walnut st., Camden
 Cramer, Alfred, Jr., 211 N. 5th st., Camden
 Crist, Walter A., 725 Collings av., W. Collingsw'd
 Crowley, Joseph W., 4005 Westville av., Camden
 Davis, Albert B., 511 Cooper st., Camden
 Day, Grafton E., Fraxer & N. J. avs., Collingsw'd
 Decker, Henry B., 527 Penn st., Camden
 Del Duca, Vincent, 919 S. 5th st., Camden
 Delbert, Irwin E., 618 Benson av., Camden
 Donoho, A. P., Walnut & Centre, Merchantville
 Dunham, Henry B., Greenlock
 Eaton, Arthur T., 201 4th av., Haddon Heights
 Ellis, Alexander, 513 Broadway, Camden
 Elwell, Alfred M., 407 Cooper st., Camden
 Ewing, Leslie H., Berlin
 Evans, Winborne D., 2704 Westville av., Camden
 Filkins, Cedric E., Audubon
 Fisher, Stella C., 4401 Westfield av., Camden
 Gamon, Robert S., 558 Newton av., Camden
 German, Geo. B., 511 Cooper st., Camden
 Glover, Lawrence L., 232 King's Hwy, Haddonfield
 Goldstein, Hyman I., 1425 Broadway, Camden
 Haines, Mabel S., 600 White Horse Pike, Audubon
 Haines, Wm. H., 600 White Horse Pike, Audubon
 Haley, John J., 851 Monmouth, Gloucester
 Harris, Edwin A., Stratford
 Hirst, E. Reed, 586 Federal st., Camden
 Hirst, Levi B., 586 Federal st., Camden
 Hollingshed, Beulah S., 600 Benson, Camden
 Horner-Roger, Clara L., 721 Cooper, Camden
 Howard, J. Edgar, 67 Main st., Haddonfield
 Hughes, Thos. E., 223 Cooper st., Camden
 Hummel, Ernest G., 414 Cooper st., Camden
 Hurff, Joseph E., Blackwood
 Hutcheson, Chas. R., 517 Cooper st., Camden
 Jack, H. Wesley, 920 Haddon av., Collingswood
 Jackson, Chas. H., 1250 Pk. Boulevard, Camden
 Jarrett, Harry, 925 Broadway, Camden
 Jennings, Chas. H., 116 No. Centre st., Merch'tville
 Jennings, Wm. B., King's Highway, E. Haddonfield
 Johnson, Chas. H., 632 Benson st., Camden
 Kain, Wm. W., Cape May Court House, R.F.D.No.1
 Kain, Thomas M., 403 Cooper st., Camden
 Kaufman, Ernest W., 2225 River rd., Camden
 Kline, Oram R., 414 Cooper st., Camden
 Lee, Thomas B., 527 Penn. av., Camden
 Leavitt, John F., 522 N. 3rd st., Camden
 LeFevre, Adriennett L., Blackwood
 Lewis, Thos. K., 47 S. 27th st., Camden

Lippincott, A. Haines, 406 Cooper st., Camden
 Lovett, Jos. C., Municipal Hospital, Camden
 Lyon, Leslie C., Magnolia
 Macalister, Alex., 582 Federal st., Camden
 McConaghy, Thos. P., 1017 Cooper st., Camden
 Madden, Theop. W., 16 Fraser av., Collingswood
 Mahaffey, Jesse L., 408 Cooper st., Camden
 Marcarian, Henry B., 904 Cooper st., Camden
 Marcy, John W., 117 E. Park st., Merchantville
 Marshall, Lawrence H., 669 Ferry av., Camden
 Mecray, Paul M., 405 Cooper st., Camden
 Mengel, Willard G., 410 Haddon av., Camden
 Meyer, George P., 410 Haddon av., Camden
 Nicholson, Jos. L., 205 Wash. av., Haddonfield
 Nowrey, Jos. E. Jr., 431 Vine st., Camden
 Osmun, Milton M., 611 Broadway, Camden
 Palm, Howard F., 614 N. 2d st., Camden
 Phillips, Claude B., 891 Haddon av., Collingswood
 Powell, Wm. R., 702 Market st., Camden
 Pratt, William H., 516 Cooper st., Camden
 Raughley, Wm. C., Taunton av., Berlin
 Rhone, David S., 1202 Haddon av., Camden
 Richardson, Emma M., 577 Steven st., Camden
 Roberts, Jos. E., Jr., 403 Cooper st., Camden
 Rogers, Edw. B., 814 Haddon av., Collingswood
 Ross, Alex. S., 542 Cooper st., Camden
 Rossell, Edward W., 801 Cooper st., Camden
 Saunders, Orris W., 1700 Broadway, Camden
 Schall, Elmer R., 7th & Elm st., Camden
 Schrack, Helen F., 726 Cooper st., Camden
 Schwartz, Henry C., Atco, N. J.
 Segal, Meyer, 814 Kaghn av., Camden
 Shafer, Albert H., 409 Cooper st., Camden
 Shafer, Fred'k Wm., 634 Penn av., Camden
 Sharp, Jennie S., 726 Cooper st., Camden
 Shaw, Ernest B., 811 Col'gsw'd av., Collingswood
 Sherk, A. Lincoln, 2647 Westfield av., Camden
 Shope, E. P., 956 Newton av., Camden
 Sieber, Isaac G., 204 Merchant st., Audubon
 Smith, James D., 701 N. 6th st., Camden
 Smith, Walter H., 100 King's Hwy, W. Haddonfield
 Stone, A. L., 2833 Berkley st., Camden
 *Strock, Daniel, 326 Cooper st., Camden
 Summerill, Garnett, 330 Cooper st., Camden
 Van Seiver, John E. L., 106 Broadway, Camden
 Vaughan, Jas. M., 825 Kaighn av., Camden
 Ward, Lettie A., 325 Cooper st., Camden
 *Westcott, Wm. A., Wash. & Jeff., Berlin
 West, Gordon F., 2704 Westfield av., Camden
 Wilson, L. R., 3320 Federal st., Camden
 *Young, Paul T., 533 Monm'th st., Gloucester City

Honorary Members.

Boughman, G. W., Marshalltown, Del.
 Davis, Henry H.
 Davis, John B., Philadelphia, Pa.
 De Groft, Eugene, Woodstown, N. J.
 Dinges, John W., Camden
 Garrison, The Hon. Charles, Merchantville
 Iszard, William H., Camden.
 Worth, James H., Albuquerque, New Mexico

Resigned

Riddle, H. S.

Received on Transfer

Mengel, Willard G.
 Rappoport, David N.

Number of members and basis of representation, 114.

100 per cent. paid up March 8, 1928.

*Deceased.

CAPE MAY COUNTY. (5)

Society organized December 18, 1883. Meets first Tuesday in April and October. Annual meeting in October.

President.

Pettit, Hurchel, Ocean City

Vice-President.

Marchall, Randolph, Tuckahoe

Secretary and Reporter.

Way, Eugene, Dennisville

Treasurer.

Tomlin, H. Hurlburt, Wildwood

Censors.

Haines, Willets P., Ocean City
Mayhew, S. Dixon, Wildwood
Gandy, C. M., Ocean View

Corsan, Allen, Ocean City
Crowe, Aldrich, Ocean City
Cryder, Millard, Cape May Court House
Dandois, George F., Wildwood
Darby, A. Eugene, Ocean City
Gandy, Charles M., Ocean View
Haines, Willets P., Ocean City
Hughes, Frank R., Cape May

Lake, W. A., Erma
Mace, Margaret, Wildwood
Marshall, Randolph, Tuckahoe
Pettit, Herschel, Ocean City
Smith, Marcia V., Ocean City
Tomlin, H. Hurlburt, Wildwood
Townsend, John B., Ocean City
Way, Clarence W., Sea Isle City
Way, Eugene, Dennisville
Way, Julius, Cape May Court House
Whiticar, John H., Ocean City
Ziegler, Oscar, Wildwood

Honorary Members.

Gandy, Charles L., U. S. A.
Gordon, Alfred, Philadelphia, Pa.
Ingram, J. H., China
Reik, Henry O., Atlantic City

Received on Transfer

Crowe, Aldrich, from Ocean County
Smith, Marcia V., from Ocean County

Number of members and basis of representation, 20.

100 per cent of membership in good standing
March 8, 1928.

CUMBERLAND COUNTY. (6)

Society organized June 16, 1816. Meets second Tuesday of January, April, July and October. Annual meeting in October.

President.

Knowles, James S., Millville

Vice-President.

Sewall, Millard F., Bridgeton

Secretary.

Lyon, Earl C., Bridgeton

Treasurer.

Wilson, H. H., Bridgeton

Reporter.

Corson, Elton S., Bridgeton

Censors.

Gray, Charles M., Vineland
Kauffman, Louis J., Millville
Sewall, Millard F., Bridgeton

Baker, Hugh H., Vineland
Bacon, Mary, Bridgeton
Bennett, Samuel D., Millville
Berliner, Kurt J., Vineland
Branin, Howard S., Millville
Butcher, Charles, Heisleville
Clippinger, R. D., Vineland
Corson, Elton S., Bridgeton
Cornwell, Alfred W., Bridgeton
Day, Samuel Thomas, Port Norris
Elmer, Matthew K., Bridgeton
Egbert, Edward H., Vineland
Foltz, H. S., Vineland
Franckle, Cornelius S., Millville
Fritts, Herbert H., Shiloh
Garrison, Walter, Sherman, Cedarville
Giacalone, Vincenzo, Vineland
*Giles, Eileen I., Bridgeton
*Glendon, Walter P., Bridgeton
Gray, Charles M., Vineland
Harris, Allen, Greenwich
Kauffman, Louis J., Millville
Knowles, James S., Millville
Lloyd, Reba, (Kumpf), Bridgeton

Loper, John C., Bridgeton
Lore, Harry E., Cedarville
Lummis, C. Percy, Bridgeton
Lyon, Earl C., Bridgeton
Mayhew, Charles H., Millville
Miller, H. Garrett, Millville
Moore, John H., Bridgeton
Myatt, Leslie E., Bridgeton
Oliver, David H., Bridgeton
Reeves, J. Franklin, Bridgeton
Sewall, Millard F., Bridgeton
Sharp, Charles E., Port Norris
Sheppard, A. G., Elmer
Shepperd, Frank R., Millville
Slattery, Mary E., Vineland
Simkins, Raymond, Bridgeton
Smith, Thomas J., Bridgeton
Thomas, George N., Vineland
Van Deusen, Edwin H., Vineland
Wainwright, F. P., Bridgeton
Webster, D. King, Leesburg
Weithaase, Helen, Vineland
Whaland, Berta, Bridgeton
Wilson, Charles W., Vineland
Wilson, Herbert H., Bridgeton
Woodruff, Dare, Vineland

Associate Members.

Ashton, W. E., 2011 Walnut st., Phila., Pa.
Barton, J. M., 1314 Spruce st., Phila., Pa.
Deland, Judson, 317 S. 18th st., Phila., Pa.
De Costa, J. C., 2045 Walnut st., Phila., Pa.
Hare, H. A., 1801 Spruce st., Phila., Pa.
Hirst, B. C., 1821 Spruce st., Phila., Pa.
Keen, W. W., 1729 Chestnut st., Phila., Pa.
Noble, Charles P., 1509 Locust st., Phila., Pa.
Reisman, David, 162 Spruce st., Phila., Pa.

Honorary Members.

Applegate, J. C., 3504 N. Broad st., Phila., Pa.
Snyder, Sharp M., Greenwich.

Number of members and basis of representation, 49.

100 per cent, in good standing March 8, 1928.

ESSEX COUNTY. (7)

Society organized June 18, 1816. Meets second Thursday, at call of Council, from October to May. Annual meeting in October.

President.

Danzis, Max, 608 High st., Newark

Vice-President.

Connolly, Richard N., City Hospital, Newark

Secretary.

Pinneo, Frank W., 439 Mt. Prospect av., Newark

Treasurer.

Rogers, Robert H., 49 Ninth av., Newark

Reporter.

Connolly, John J., 30 Wallace pl., Newark

Councillors.

Dowd, A. F.,
Barkhorn, Henry C.,
Sherman, Elbert S.,
Stahl, Alfred
Kraker, D. A.,
Murray, E. W.,
Griffiths, C. B.

All (21) Ex-Presidents Ex Officio.

Abraham, Chas. F., 84 S. Arlington av., E. Orange
Abrams, A. B., 668 Clinton av., Newark
Adams, John K., 3 Prospect st., E. Orange
Albano, Joseph, 535 N. 7th st., Newark
Albee, Geo. C., 219 S. Orange av., S. Orange
Alexander, Wallace G., 48 Webster pl., Orange
Allen, G. Herbert, 181 Roseville av., Newark
Alling, Frederick A., 12 Central av., Newark
Ambrose, Anthony, 71 Congress st., Newark
Angelillo, M. C., 333 Clifton av., Newark
Areson, Wm. H., 153 B'vue av., Upper Montclair
Asher, Maurice, 186 Clinton av., Newark
Aszody, Paul, 9 Pierce st., Newark
Bachmann, Wm., 87 Hillcrest ter., East Orange
Bagg, Linus W., 87 Lincoln Park, Newark
Baker, Charles F., 198 Clinton av., Newark
Baker, Maelyn, 681 Stuyvesant av., Irvington
Baird, Thompson M., 782 Kearny av., Arlington
Baldwin, Samuel H., 626 Clinton av., Newark
Balson, Zach D. B., 241 16th av., Newark
Banks, Winifred D., 6 N. Munn av., East Orange
Barkhorn, Henry C., 45 Johnson av., Newark
Bassin, John N., 25 Van Ness pl., Newark
Baum, Felix, 138 Clinton av., Newark
Becker, Fred W., 14 Clinton pl., Newark
Becket, George C., 350 Springdale av., E. Orange
Beggs, William F., 2 Lombardy st., Newark
Beling, Chris. C., 109 Clinton av., Newark
Bell, Thomas, 340 Belmont av., Newark
Benedict, A. C., 121 Irvington av., South Orange
Bennett, Charles D., 300 Broadway, Newark
Bennett, W. F., Essex Mt. Sanitorium, Verona
Berg, S., 530 Central av., Newark
Bernstein, Julius, 345 Camden st., Newark
Beyer, Othmar J., 42 Laurel av., Irvington
Bianchi, Angelo R., 104 7th av., Newark
Bien, Frank A., 999 Clinton av., Irvington
Bierman, Irvin, M., 18 Stratford pl., Newark
Birdsall, Clarence A., 3 Small av., Caldwell
Bingham, Arthur W., 123 Harrison st., E. Orange
Bissett, John V., 15 Lombardy st., Newark
Blackburne, George, 19 Fulton st., Newark
Blakely, Edward W., 232 Ivy Court, Orange
*Blank, Louis N., 74 S. 8th st., Newark
Bleick, Theo. E., 61 Van Ness pl., Newark
Bleick, William D., 22 Osborne ter., Newark
Bleier, Louis, 31 Lincoln Park, Newark
Blum, Karl M., 310 Main st., Orange
Bogdan, E. A., Smalley ter. & Grove st., Irvington
Bootay, Fred S., 607 Washington av., Belleville
Bove, Joseph, 306 Lincoln av., Orange
Boyle, Thos. P., 2 Gouverneur st., Newark
Bradshaw, John H., 27 High st., Orange
Bradford, Stella S., 16 Seymour st., Montclair
Braun, Gus A., 391 Bergen st., Newark
Brien, Wm. M., 449 Main st., Orange
Breitstadt, Chas. A., 259 Roseville av., Newark
Brim, Anne J. S., 373 William st., East Orange
Broadnax, Mary E., 83 Lincoln Park, Newark
Brooke, C. R., 13 Pennington st., Newark
Brothers, J. H., 128 Broad st., Newark
Brotman, Morton M., 90 Avon av., Newark
Brotman, H. A., 565 Bergen st., Newark
Brown, Chester R., 22 Midland av., Arlington
Brown, Chester T., Prudential Ins. Co., Newark
Brown, Lewis W., 904 Sanford av., Irvington
Brown, Jas. S., 43 S. Fullerton av., Montclair
Brown, Richard J., 211 Roseville av., Newark
Bruington, S. S., 115 Spruce st., Newark
Buckley, J. L., 684 Franklin av., Nutley
Buckner, R. W. H., 157 Somerset st., Newark
Buermann, William, 9 Lincoln Park, Newark
Bull, William J., 98 Park st., Montclair
Bumsted, C. V. R., 235 Grafton av., Newark
Bunn, F. C., 30 Hillyer st., Orange
Burne, John J., 17 Gould av., Newark
Burns, Edward L., 261 Broad st., Newark
Busch, Herman, 38 Johnson av., Newark
Bush, Archer C., 40 Union av., Montclair
Butler, Eustace C., 249 Bloomfield av., Caldwell
Buvinger, Chas. W., 50 Washington st., E. Orange
Cahill, L. A., 353 Lafayette st., Newark
Caldwell, J. A., 45 S. Mountain av., Montclair
Camche, L. J., 94 Hawthorne av., Newark
Cameron, Edwin A., 186 S. Burnett st., E. Orange
Campbell, H. B., 392 Washington st., Newark
Campbell, Wellington, Short Hills
Carbone, Francis R., 157 Hunterdon st., Newark
Cardwell, E. P., 12 Central av., Newark
Carman, Fletcher F., 31 Lincoln Park, Newark
Casale, John B., 200 Highland av., Newark
Cater, Douglas A., 55 Harrison st., E. Orange
Cassini, Henry C., 174 Hunterdon st., Newark
Chamberlain, Aims R., Maplewood
Chapman, R. W., 835 Bergen st., Newark
Chmelnik, A. G., 919 Bergen st., Newark
Cherashore, H., 216 Franklin av., Nutley
Chiger, Alex S., 621 High st., Newark
Chisholm, G., 14 Boston st., Newark
Christian, A. C., 1080 Clinton av., Irvington
Clark, J. Henry, 12 Walnut st., Newark
Clarkin, Jos. A., 905 So. 16th st., Newark
Coe, Richard, 75 Lincoln Park, Newark
Coghlan, Jasper, 17 Academy st., Newark
Cohen, M., 106 Valley rd., Montclair
Cohen, Sidney L., 9 Hillside av., Newark
Cohn, Herman, 393 Clinton av., Newark
Cohn, Royal M., 740 Clinton av., Newark
Colsh, LeRoy L., 202 Maplewood av., Maplewood
Comanco, Harry N., 690 Clinton av., Newark
Condon, John F., 686 Mt. Prospect av., Newark
Conlon, Philip, 25 James st., Newark
Connamacher, H. S., 571 Springfield av., Newark
Connolly, John J., 30 Wallace pl., Newark
Connolly, Richard N., City Hospital, Newark
Cook, Hugh F., 443 Broad st., Newark
Cook, Mary, 12 James st., Newark
Cooke, Wm. H., 303 Main st., East Orange
Corrigan, Geo. F., 344 Lafayette st., Newark
Corwin, Theo. W., 671 Broad st., Newark
Coughlan, Ella A., 10 Oakwood av., Orange

ESSEX COUNTY.—Continued.

- Cox, John Calvin, 187 Maplewood av., Maplewood
 Crane, Chas. G., 78 Farley av., Newark
 Crankshaw, C. W., Prudential Ins. Co., Newark
 Craster, Chas. V., 381 Parker st., Newark
 Crawford, G. V., 28 Carnegie av., E. Orange
 Crecca, Wm. D., 111 Park av., Newark
 Creswell, Willis W., 48 Warren st., Newark
 Curtis, Elbert A., 65 Central av., Newark
 Dane, Chas, 61 Scotland rd., South Orange
 Dane, John, 61 Scotland rd., South Orange
 Daniell, Arthur, 611 Springdale av., East Orange
 Danzis, Max, 31 Lincoln Park, Newark
 Daron, S., 61 West st., Newark
 Davenport, Peter B., 764 S. Orange av., Newark
 Davidson, Louis L., 190 Clinton av., Newark
 Davis, Lester R., 59 Chancellor av., Newark
 DeFronzo, M., 180 Fairmont av., Newark
 Del Deo, Nicholas V., 47½ State st., Newark
 Demarest, Lawrence M., 228 S. Orange av., S. Or.
 Denes, O., 205 Franklin av., Nutley
 Dennis, John, 1739 N st., N. W., Washington, D.C.
 Deriveaux, John A., 103 Clinton av., Newark
 De Vausney, Winfield S., 27 Fulton st., Newark
 Devlin, Frank, 617 Broadway, Newark
 Devlin, Hugh J., 72 Thomas st., Newark
 Dias, Joseph L., 568 Broad st., Newark
 Dieffenbach, Rich'd H., 570 Mt. Prospect av., N'k
 Dodd, Edward L., 131 Forest st., Belleville
 Dodd, Raymond C., 18 Snowden pl., Glen Ridge
 Dodge, Walter, 36 Cleveland st., Orange
 Donahue, Wm. J., 173 Roseville av., Newark
 Donnelly, Robt. J., 26 Wallace pl., Newark
 Doremus, Widmer E., 32 Fulton st., Newark
 Dowling, Chas. E., 215 Park av., Orange
 Dowd, Amb. F., 239 Broadway, Newark
 Dragonetti, Edvige N., 177 Clifton av., Newark
 DuBois, M. G., 769 High st., Newark
 Duncker, Fred'k W., 15 Court st., Newark
 Eagleton, Wells P., 15 Lombardy st., Newark
 Ebenfield, Samuel W., 344 High st., Newark
 Edelen, James J., 189 Amherst st., East Orange
 Edwards, Sarah M., 207 Summer av., Newark
 Einhorn, Rosa, 468 Clinton av., Newark
 Elliot, Daniel, 44 Bleecker st., Newark
 Emerson, Linn, Metropolitan Bldg., Orange
 Englander, C., 41 Hillside av., Newark
 English, James R., 51 Cypress st., Newark
 English, John T., 702 Stuyvesant av., Irvington
 Epler, Don A., 45 Hillside av., Newark
 Epstein, Henry B., 31 Lincoln Park, Newark
 Erler, Eugene W., 119 N. 5th st., Newark
 Ewing, Harvey M., 31 Lincoln Park, Newark
 Failing, Brayton E., 71 Washington st., Newark
 Farden, Jos. L., 342 Roseville av., Newark
 Farr, Irving L., 214 Walnut st., Montclair
 Faughnan, Rose, 97 High st., Passaic
 Fechner, Julius, 138 W. Kinney st., Newark
 Fern, S. S., 122 Elizabeth av., Newark
 Ferris, Sanford J., 321 S. 9th st., Newark
 Fewsmith, Jos. L., 120 Second av., Newark
 Fine, M. J., 31 Lincoln Park, Newark
 Fink, A. E., 82 Baldwin av., Newark
 Finkler, Rita S., 642 High st., Newark
 Fischer, Wm. C., 731 Mt. Prospect av., Newark
 Fitzpatrick, Edward F., 574 Warren st., Newark
 Flachs, Adolph, 347 Lafayette st., Newark
 Flower, Morris A., 1007 Broad st., Newark
 Forsyth, Kenneth C., 533 Broadway, Newark
 Fort, J. Irving, 306 Roseville av., Newark
 Forte, Frank S., 456 Roseville av., Newark
 Foster, Herbert W., 10 The Crescent, Montclair
 Foster, W. Story, 233 Mt. Prospect av., Newark
 Frederick, Gus H., 349 Camden st., Newark
 Freeman, Richard D., 52 Vose st., South Orange
 Freinkel, J., 100 Avon av., Newark
 Froelich, J. C., 74 Ingraham pl., Newark
 Furman, Benj. A., 31 Roseville av., Newark
 Furst, Nathan J., 190 Johnson av., Newark
 Ganley, Arthur J., 390 Park av., East Orange
 Gantz, Emma O., 215 N. Grove st., East Orange
 Gardam, Jos. W., 16 Longfellow av., Newark
 Gauch, William, 177 Elwood av., Newark
 Gennell, Ernest, 298 Parker st., Newark
 Gershenfeld, David B., 20 Hillside av., Newark
 Gifford, W. Royal, 247 Park av., East Orange
 Gilbert, Harry J., 588 Broadway, Newark
 Goeller, J. D., 1165 W. Clinton av., Irvington
 Goffman, Emanuel, 67 Valley rd., Montclair
 Goldstein, Wm. H., 281 Kearny av., Kearny
 Goodwin, Wm. M., 75 Congress st., Newark
 Grady, Wm. F., 42 N. Fullerton av., Montclair
 Granger, L. Y., 28 Richmond st., Newark
 Graves, Wm. B., 426 Main st., East Orange
 Gray, John W., 142 Clinton av., Newark
 Green, William H., 230 Bank st., Newark
 Greenbaum, S., 400 Belmont av., Newark
 Greenberg, Samuel, 46 Johnson av., Newark
 Greenfield, Bern'd H., 691 Clinton av., Newark
 Greifinger, M. H., 225 Pomona av., Newark
 Griffiths, C. B., 31 Lincoln Park, Newark
 Hagerty, John F., 30 Wallace pl., Newark
 Hagney, Fred W., 669 Elizabeth av., Newark
 Hahn, William, 15 Lombardy st., Newark
 Halperin, Clement J., 641 High st., Newark
 Halsey, Levi W., 61 Church st., Montclair
 Hamilton, B. C., 83 2nd av., Newark
 Hanan, Jas. T., 11 The Crescent, Montclair
 Harden, Albert S., 540 Warren st., Newark
 Harhen, Geo. E., 22 Brookside av., Caldwell
 Hart, Hugh M., 300 Mt. Prospect av., Newark
 Harvey, Thos. W., 59 Maine st., Orange
 Harvey, Thos. W., Jr., 59 Main st., Orange
 Hauck, Lydia B., 644 Stuyvesant av., Irvington
 Hauck, Wm. H., 644 Stuyvesant av., Irvington
 Hauck, Wm. J., 207 Mt. Prospect av., Newark
 Haussling, Francis R., 661 High st., Newark
 Hawkes, E. Zeh, 84 Washington st., Newark
 Heath, Louanna, 20 Fairmount av., Newark
 Heller, Nathan B., 189 16th av., Newark
 Hemsath, John, 36 Spruce st., Newark
 Herman, John H., 197 S. Centre st., Orange
 Herndon, L. S., 35 Johnson av., Newark
 Herold, Harvey T., 850 S. 13th st., Newark
 Herold, Herman C. H., 1115 Broad st., Newark
 Hewson, Jas. S., 374 Avon av., Newark
 Hexamer, Fred, 50 Lyons av., Newark
 Heyman, Arthur, 105 Tracy av., Newark
 Hicks, William H., 46 Milford av., Newark
 Hirschberg, Samuel, 615 High st., Newark
 *Hitchcock, Wm. E., 53 Broadway, Newark
 Hobert, Richard T., 191 Belleville av., U. Montclair
 Hoeller, Wm. F., 808 S. 11th st., Newark
 Holden, Edgar, Jr., 217 Broadway, Newark
 Holler, Henry G., 234 Montclair av., Newark
 Holmes, Geo. J., 17 Elizabeth av., Newark
 Hood, Philip G., 19 Lincoln Park, Newark
 Horsford, Fred C., 305 Broadway, Newark
 Hosp, Paul H., 842 S. 12th st., Newark
 Hubbard, Fayette E., 65 Church st., Montclair
 Huber, Wm. H., 15 Salem st., Newark
 Huberman, J., 853 S. 12th st., Newark
 Hughes, Lee W., 1019 Broad st., Newark
 Hulet, Albert G., 20 Hawthorne av., East Orange
 Hunt, Ralph H., 29 Harrison st., East Orange
 Hurff, Jos. W., 86 Washington st., Newark
 Husserl, Siegfried, 777 Clinton av., Newark
 Ill, Carl H., 188 Clinton av., Newark
 Ill, Charles L., 188 Clinton av., Newark
 Ill, Edward J., 1004 Broad st., Newark
 Ill, Edgar A., 1004 Broad st., Newark

ESSEX COUNTY.—Continued.

- Ill, Herbert M., 188 Clinton av., Newark
 Irwin, Jas. R., 330 Washington av., Belleville
 Jackson, Albert F., Hillside av., Nutley
 Jackson, E. C., 98 Washington av., E. Orange
 Jackson, Geo. G., 20 Milford av., Newark
 Jacobson, Fred'k C., 1074 Broad st., Newark
 Janifer, Clarence S., 208 Parker st., Newark
 Jaso, Jas. V., 274 Littleton av., Newark
 Jedel, Meyer, 125 Fourth st., Newark
 Jessurun, S. H., 613 High st., Newark
 Just, Francis, 564 High st., Newark
 Kalter, George E., 640 Prospect, Maplewood
 Kaplan, Benjamin E., 695 Clinton av., Newark
 Kaufman, Ignatz, 190 Clinton av., Newark
 Kaufman, Jerome G., 299 Clinton av., Newark
 Kaufman, M. J., 319 Belmont av., Newark
 Kaufhold, Frank, 41 Leslie st., Newark
 Keim, Wm. F., 25 Roseville av., Newark
 Keller, Paul, Beth Isreal Hospital, Newark
 Keller, Sidney C., 31 Lincoln Park, Newark
 Kenney, J. A., 132 W. Kinney st., Newark
 Kern, E. Clarence, 45 Park st., Montclair
 Kerns, Francis J., 556 Warren st., Newark
 Kessler, Henry B., 666 Clinton av., Newark
 Kildee, Henry A., Essex Co. Hosp., Cedar Grove
 Kirkman, Leroy G., 176 Roseville av., Newark
 Kirkwood, Allan S., 61 Elm st., Montclair
 Klenk, J. P., 328 Belleville av., Bloomfield
 Klein, Emanuel, 680 Clinton av., Newark
 Klein, Ignatz, 471 Springfield av., Newark
 Klein, Edward C., Jr., 209 Littleton av., Newark
 Koch, Louis A., 16 Chestnut st., Newark
 Kraker, David A., 31 Lincoln Park, Newark
 Krone, W. F., 39 Lincoln Pk., Newark
 Kummel, M., 315 Central av., East Newark
 Lane, Austin W., 59 Prospect st., East Orange
 Lane, Frank B., 33 Woodland av., East Orange
 Lauterborn, Thos. W., Essex Sanitorium, Verona
 Lawrence, M. J., 279 Mt. Prospect av., Newark
 Lebel, Louis J., 165 Grant av., Nutley
 Lee, Stephen G., 55 Halstead st., East Orange
 Leonardis, Jas. V., 94 Jefferson st., Newark
 Levin, M. L., 209 Avon av., Newark
 Levy, Julius, 66 Baldwin av., Newark
 Lewis, Geo. R., 458 Washington av., Belleville
 Leyenberger, S. B. W., 310 Mt. Prospect, Newark
 Livingston, Paul, 299 Main st., East Orange
 Lockwood, Frank W., 237 Prospect st., E. Orange
 Long, Herbert W., 102 Jefferson st., Newark
 Lowitz, Otto, 78 Clinton av., Newark
 Lowrey, Jas. H., 79 Congress st., Newark
 Lowy, Otto, 190 Clinton av., Newark
 Lovell, Fred'k H., 1013 Clinton av., Irvington
 Lovell, J. F., 1011 Clinton av., Irvington
 Luban, Benjamin, 730 High st., Newark
 Luongo, Frederico, 212 So. Centre st., Orange
 Lundblad, Walt. E., 555 William st., East Orange
 Lurie, Sol I., 21 Hillside av., Newark
 Lyons, James V., 333 Park av., Orange
 Mac Pherson, Elwood H., 12 Rawley pl., Millburn
 MacArthur, C., 172 Roseville av., Newark
 Macdonald, Wentworth S., 56 Church st., M'tclair
 McArthur, Chas., 31 Lincoln Park, Newark
 McBride, Hesser G., 1072 S. Orange av., Newark
 McCabe, Thos. S., 913 Broad st., Newark
 McCauley, F. J., 31 Lincoln Park, Newark
 McCormick, Daniel L., 9 Tichenor st., Newark
 McCroskery, Jas. H., 206 N. Arlington av., E. Or.
 McEwen, Floy, 299 Belleville av., Newark
 McLellen, Geo. A., 19 Hawthorne av., E. Orange
 McVay, Edward A., 234 Lafayette st., Newark
 Mass, Max A., 329 Clinton av., Newark
 Mabey, J. Corwin, 242 Clairmount av., Montclair
 Maciejewski, A. S., 212 Van Buren st., Newark
 Mackey, D. E., 175 Washington st., Bloomfield
 Mancusi-Ungaro, E., 156 Mt. Prospect av., Newark
 Mancusi-Ungaro, L., 156 Mt. Prospect av., Newark
 Markens, Edward W., 442 High st., Newark
 Marks, Edward G., 655 Kearny av., Arlington
 Margulis, Boris, 339 Hawthorne av., Newark
 Martin, Wm. P., 25 Holland rd., S. Orange
 Martine, Frank L., 182 Roseville av., Newark
 Martinetti, Carlo D., 311 Central av., Orange
 Matheke, O. G., 328 Sussex av., Newark
 Martland, Harrison S., 180 Clinton av., Newark
 Matthews, H. E., 504 Hillside av., Orange
 May, Ernst A., 728 High st., Newark
 Medd, John C., 25 Curtis pl., Maplewood
 Meehan, Martin M., 225 Union av., Belleville
 Meeker, Frank B., 360 Clifton av., Newark
 Meeker, Irving A., 581 Valley rd., U. Montclair
 Menk, Paul E., 19 Lincoln Park, Newark
 Mercer, Archibald, 31 Washington st., Newark
 Merliss, Eugene, 145 South Orange av., Newark
 Miller, Jos. A., 364 Prospect st., South Orange
 Minard, E. L., 140 4th av., East Orange
 Minnefor, Chas. A., 214 S. 6th st., Newark
 Minningham, Wm. D., 11 Astor st., Newark
 Mishell, Daniel R., 85 Lincoln Park, Newark
 Mitchell, August J., 59 South st., Newark
 Mitsakos, B., 500 High st., Newark
 Mockridge, Oscar A., 8 S. Mountain av., Montclair
 Moore, John D., 6 Washington av., Bloomfield
 Morgan, Browne, 260 Liberty st., Bloomfield
 Morris, Clement, 75 Washington av., Newark
 Morrison, Caldwell, 379 7th av., Newark
 Morrison, J. Bennett, 66 Milford av., Newark
 Morse, Geo. V., 70 Watessing av., Bloomfield
 Motzenbecker, P. F., 31 Lincoln Park, Newark
 Moulton, Chas. D., 122 Park av., East Orange
 Mount, W. B., 21 Plymouth, Montclair
 Mullin, Raymond J., 857 S. 11th st., Newark
 Murray, Harold A., 624 Mt. Prospect av., Newark
 Murray, Eugene W., 433 Mt. Prospect, Newark
 Muta, Samuel A., 47 Park av., West Orange
 Nash, Albert B., 10 S. 13th st., Newark
 Nash, Alexander E., 20 Forest av., Verona
 Nash, W. G., 20 Clinton st., Newark
 Naturo, Joseph, 172 Littleton av., Newark
 Newman, Emanuel D., 81 New st., Newark
 Noll, Louis, 1026 Clinton av., Irvington
 Nydes, John, 239 Springfield av., Newark
 Nyiri, William, 17 Hillside av., Newark
 O'Connor, D. F., 671 Broad st., Newark
 O'Connor, M. J., 7 Durand pl., Irvington
 O'Crowley, Clarence R., 31 Lincoln Park, Newark
 O'Neil, Chas. L., 11 N. 7th st., Newark
 Oleott, Geo. P., 23 Hamilton st., East Orange
 Oleynick, S., 107 Clinton av., Newark
 Olini, Joseph J., 30 Breintnall pl., Newark
 Openchowski, M., 635 High st., Newark
 Orloff, Samuel, 155 Polk st., Newark
 Orton, Henry B., 24 Commerce st., Newark
 Ost, Henry B., 477 Springfield av., Newark
 Paczkowski, Thad., 194 Broad st., Bloomfield
 Paddock, Royce, 1019 Broad st., Newark
 Palmer, Gideon H., 10 N. Munn av., East Orange
 Palmer, H. S., 257 Mulberry st., Newark
 Pannell, Walter L., 7 Prospect st., East Orange
 Pannullo, John N., 260 Van Buren st., Newark
 Parisi, Anthony, 150 Hunterdon st., Newark
 Parker, John E., 385 Park av., Orange
 Pasonnet, Eugene V., 31 Lincoln Park, Newark
 Pascall, Thos. M., 197 Lincoln av., Newark
 Payne, Guy, Overbrook Hospital, Cedar Grove
 Pendexter, Sid. E., 11 S. Arlington av., E. Orange
 Petry, William, 109 Treacy av., Newark
 Phelan, Edward, 18 South st., Newark
 Pignataro, Mateo S., 37 Johnson av., Newark
 Pinneo, Frank W., 439 Mt. Prospect av., Newark

ESSEX COUNTY.—Continued.

- Pomeranz, R., 31 Lincoln Park, Newark
 Potter, Raymond T., 86 Harrison av., East Orange
 Potter, Robert C., 25 Fulton st., Newark
 Preston, Perry B., 12 Palm st., Newark
 Price, Nathaniel G., 31 Lincoln Park, Newark
 Pringle, F. A., 192 Clairmont av., Montclair
 Pudney, William K., 11 Seymour av., Montclair
 Pyle, Wellden, 110 Irvington av., S. Orange
 Quinby, Wm. O'Gorman, 14 James st., Newark
 Rado, William, 48 Wilson av., Newark
 Rados, Andrew, 299 Clinton av., Newark
 Ramos, Nicholas J., 188 Market st., Newark
 Ranson, Bris. B., Jr., 601 Ridgew'd av., Maplewood
 Rathgeber, Chas. F., 18 William st., East Orange
 Rathgeber, Wm. M., 249 Roseville av., Newark
 Rawitz, Sidney B., 190 Clinton av., Newark
 Reich, H., 765 High st., Newark
 Reissman, E., 31 Lincoln Park, Newark
 Reitter, Geo. S., 191 Halstead st., East Orange
 Renzulli, Francesco, 228 S. 7th st., Newark
 Rettig, I. L., 36 Milford av., Newark
 Ribbans, Robert C., 63 Central av., Newark
 Rich, Charles, 191 Littleton av., Newark
 Rich, Harry H., 32 Broad st., Newark
 Richardson, Arthur, 60 Orange rd., Montclair
 Ricketts, Henry E., 31 Lincoln Park, Newark
 Riggins, E. N., 81 N. Arlington av., East Orange
 Ringland, Robert F., 56 Church st., Montclair
 Ripley, Edward W., 11 Seymour st., Montclair
 Rizzolo, Edward E., 250 Mt. Prospect av., Newark
 Robbin, Lewis, 16 Clinton pl., Newark
 Robbins, Charles M., 31 Lincoln Park, Newark
 Robertson, Samuel E., 60 Tuscan rd., Maplewood
 Robinson, Benjamin A., 265 Mulberry st., Newark
 Robinson, Louis H., 31 Lincoln Park, Newark
 Roeber, Wm. J., 847 S. 16th st., Newark
 Rogers, Richard M., 1 Wallace st., Newark
 Rogers, Robert H., 49 9th av., Newark
 Rogers, George G., 796 So. Orange av., Newark
 Roh, Robert F., 1117 So. Orange av., Newark
 Rosenberg, L. Charles, 11 Murray st., Newark
 Rosenstein, S. L., 557 Clinton av., Newark
 Roth, Oswald H., 210 Littleton av., Newark
 Rothenberg, S., 1 Hillside av., Newark
 Rothseld, Abraham, 29 Scheerer av., Newark
 Rubinow, Soul M., 755 High st., Newark
 Rumage, Wm. T., 232 Lafayette st., Newark
 Runyon, Wm. J., 106 Broad st., Bloomfield
 Runyon, Mefford, 110 Irvington av., S. Orange
 *Russell, Anthony B., 72 William st., E. Orange
 Samuel, Jerome H., 268 Clinton av., Newark
 Satchwell, H. H., 640 Stuyvesant av., Irvington
 Schaaf, Edward O., 217 S. Orange av., Newark
 Schaaf, Royal A., 413 Mt. Prospect av., Newark
 Schachter, H. A., 6 Milford av., Newark
 Schaefer, Eugene P., 12 Harrison pl., Irvington
 Schectman, Vera, 557 Clinton av., Newark
 Schimmelpfenning, Rich. D., The Cres', Montcl'r
 Schiffman, Samuel, 18 Schuyler av., Newark
 Schneider, Charles A., 694 Clinton av., Newark
 Schneider, Louis A., 874 S. 13th st., Newark
 Schramm, Joseph A., 23 Darcy st., Newark
 Schulsinger, S., 136 Fleming av., Newark
 Schulte, H. A., 710 Clinton av., Newark
 Schwartz, Emanuel, 561 High st., Newark
 Scott, R. Hunter, 205 Roseville av., Newark
 Scranton, Chas. W., 31 Washington st., E. Orange
 Scudder, F. D., 63 S. Fullerton av., Montclair
 Seidler, William F., 21 Ferry st., Newark
 Seidler, V. B., 16 Plymouth st., Montclair
 Seidman, Marcus, 580 High st., Newark
 Shack, D. N., 710 Clinton av., Newark
 Shannon, Jas. B., 56 Church st., Montclair
 Shapiro, Louis, 279 Schley av., Newark
 Shapiro, S. A., 735 High st., Newark
 Shaul, F. G., 10 Washington st., Bloomfield
 Sherman, Elbert S., 671 Broad st., Newark
 Shick, Wm. F., S. Munn av., East Orange
 Silver, H. B., 357 Hawthorne av., Newark
 Silverstein, Benj. J., 319 Belmont av., Newark
 Simmons, Albert V., 720 Prospect st., Maplewood
 Singer, Max, 197 Hillside av., Newark
 Skwirsky, Joseph, 130 Watson av., Newark
 Smalley, Sara D., 530 Clifton av., Newark
 Smith, Byron J., 347 16th av., Irvington
 Smith, Ellis L., Soho Hospital, Belleville
 Smith, Henry G., Cedar Grove
 Smith, Joseph J., 325 13th av., Newark
 Smith, L. H., 32 Washington st., East Orange
 Snavelly, Earl H., City Hospital, Newark
 Sobin, Julius, 77 13th av., Newark
 Sprague, Edward W., 86 Washington st., Newark
 Staehle, Richard H., 34 Lyons av., Newark
 Staehlin, Edward, 15 Lincoln Park, Newark
 Stage, Jacob S., 601 Clinton av., Newark
 Stahl, Alfred, 55 Lincoln Park, Newark
 Stahl, Charles, 116 Lyons av., Newark
 Steiner, Edwin, 19 Lincoln Park, Newark
 Stevens, Merton B., 3 N. Arlington av., E. Orange
 Stevens, J. Thompson, 55 Park st., Montclair
 Stewart, Robert G., 73 Grove st., Montclair
 Stickle, Lloyd C., 49 Parkhurst st., Newark
 Stokes, Earl B., 21 Prospect st., East Orange
 Straub, Herbert H., 242 Springdale av., E. Orange
 Sutton, Fred A., 156 N. Day st., Orange
 Synnot, Martin J., 63 S. Fullerton av., Montclair
 Szerlip, L., 31 Lincoln Park, Newark
 Tansey, W. A., 520 Sanford av., Irvington
 Tarbell, Henry A., 11 Pennington st., Newark
 Taylor, G. Herbert, 590 Ridge ave., Maplewood
 Teeter, Charles E., 418 Orange st., Newark
 Teimer, Theodore, 17 Hillside av., Newark
 Thayer, Henry W., 28 Dodd st., Bloomfield
 Thompson, Austin B., 479 Highland av., Orange
 Thompson, Arthur F., 22 Washington st., E. Or.
 Thompson, David C., 96 Broad st., Bloomfield
 Thornhill, Arthur, e47 Forest st., Montclair
 Titman, Russell E., 275 Dodd st., East Orange
 Toal, Helene G. L., Cedar Grove
 Tobey, F. J., 11 Hazelwood av., Newark
 Tommassi, Chas. F., 166 Lafayette st., Newark
 Toye, John E., 590 Kearny av., Arlington
 Tucker, W. S., 20 E. Kinney st., Newark
 *Twinch, Sidney A., 42 Fulton st., Newark
 Twitchell, A. B., 162 S. Orange av., South Orange
 Tymeson, Walter R., Metropolitan Bldg., Orange
 Ulan, Oscar, 174 Fleming av., Newark
 Vail, Herbert B., 301 Washington av., Belleville
 Vanderhoff, Irving M., 9 Clinton st., Newark
 Van Emburg, Geo. H., 575 Belgrove Drive, Arl'g'n
 Van Ess, John, 16 Johnson av., Newark
 Vannatta, Geo. W., 224 N. Park st., East Orange
 Van Ness, H. Roy, 218 Mt. Prospect av., Newark
 Verbeck, George B., 26 Washington pl., Caldwell
 Von Hofe, Fred'k H., 255 Conway Ct., E. Orange
 Voorhees, Florence E., 83 Lincoln Park, Newark
 Waite, George N., 569 High st., Newark
 Wakeley, Wm. A., 120 Main st., Orange
 Wakeley, W. E., 323 Meadowbrook, South Orange
 Wallhauser, Henry J. F., 31 Lincoln Park, Newark
 Walton, R. W., 48 N. Fullerton av., Montclair
 Ward, Gertrude P., 41 Park pl., Bloomfield
 Ward, Wm. R., 112 Chancellor av., Newark
 Warner, Wm. H. A., 444 Central av., E. Orange
 Washington, Walter S., 520 Parker st., Newark
 Waters, Edward W., 123 Jewett av., Newark
 Weber, Francis C., 210 Mt. Prospect av., Newark
 Webner, C. F., 71 Lincoln Park, Newark
 Weinmann, Max H., 714 Scotland rd., Orange
 Weinstock, Michael B., 206 Ridgew'd av., Newark

ESSEX COUNTY.—Continued.

Weiss, Lazare, 404 Bergen st., Newark
 Weiss, Louis, 849 So. 11th st., Newark
 Weiss, Selma, 330 Belmont av., Newark
 Wendel, Aug. V., 205 Littleton av., Newark
 Wendelboe, L. T., 558 S. 10th st., Newark
 Whelan, Edward P., 231 Franklin av., Nutley
 Wherry, Elmer G., 323 Clinton av., Newark
 Whitehorne, Henry B., 32 Grove av., Verona
 Willan, E. H., 86 S. Oraton Parkway, E. Orange
 Willner, Irving, 18 Waverly av., Newark
 Wintsch, Carl H., 841 S. 12th st., Newark
 Wismar, Wm. F., 108 Belmont av., Newark
 Wolfe, Wm. W., 383 Mulberry st., Newark
 Wolfe, Jacob S., 44 Watsessing av., Bloomfield
 Wolfs, Jean F., 3 Leslie st., Newark
 Wood, E. LeRoy, 31 Lincoln Park, Newark
 Woodworth, Lucius J., 283 Franklin st., Bloomfi'd
 Woolf, Bernard H., 15 Heddon ter., Newark
 Wort, Frederick J., Jr., 1080 Broad st., Newark
 Wrensch, Alex. E., 79 Valley rd., Montclair
 Wright, Thos. H., 768 High st., Newark
 Wyatt, Joseph H., 31 Lincoln Park, Newark
 Wyker, Arthur W., 1 Park pl., Bloomfield

Yaguda, A., 651 High st., Newark
 Zehnder, Anthony C., 188 Roseville av., Newark

Honorary Members.

*Chandler, Wm. J., South Orange
 McEwen, Floy, Newark

Transferred.

DuBois, Victor, to Union County
 Quiton, Lucien, to New York City
 Steinberg, M., to New York City
 Walden, A. P., to Washington, Indiana
 Liebman, J., to Atlantic County
 Strong, Cyprus J., to New York City

Resigned.

Harris, H. C.
 Bannister, R. L.

Number of members and basis of representation, 593.

100 per cent. paid up March 8, 1928.

*Deceased.

GLOUCESTER COUNTY. (8)

Society organized December, 1818. Meets third Wednesday from November to June. Annual meeting in November.

President.

Buzby, B. F., Swedesboro

Vice-President.

Sinexon, H. L., Paulsboro

Secretary and Treasurer.

Hollinshed, Ralph K., Westville

Reporter.

Diverty, Henry B., Woodbury

Censors.

Hunter, James, Jr., Chairman, Westville
 Campbell, Duncan, Woodbury
 Phillips, Cyprus B., Pitman

Ashcraft, Samuel F., Mullica Hill
 Black, Alan B., Mickleton
 Brewer, William, Woodbury
 Burkett, W. J., Pitman
 Buzby, Benjamin F., Swedesboro
 Campbell, Duncan, Woodbury
 Carpenter, William H., Woodbury
 Chalfant, H. Bailey, Pitman
 Clements, William R., Woodbury
 Diverty, Henry B., Woodbury
 Downs, Elwood E., Swedesboro
 Fisler, C. Frank, Clayton
 Fooder, Horace M., Williamstown
 Harrington, Carey L., Woodbury
 Hillegas, E. J., Mantua

Hollinshed, Ralph K., Westville
 Hunter, James, Jr., Westville
 Knight, I. Warner, Pitman
 Lee, Harry W., Woodbury
 Livengood, B. A., Swedesboro
 Lummis, Marshal F., Pitman
 Morris, Carlyle, Woodbury
 Nelson, Harry, Woodbury
 Palen, Gilbert J., Woodbury
 Pedrick, Charles D., Glassboro
 Pegau, Paul, Woodbury
 Sheets, C. C., Paulsboro
 Sickel, Harry L., Woodbury
 Sinexson, Henry L., Paulsboro
 Stilwagon, Philip E., Bridgeport
 Stout, Harry Wilson, Wenonah
 Stewart, Irving J., Swedesboro
 Ulmer, Chester I., Gibbstown
 Underwood, J. Harris Woodbury
 Wood, Oram A., Paulsboro

Transferred.

Brewer, David, to Camden County

Honorary Members.

Hallowell, Madeline A., Atlantic City
 Iszard, William H., Camden, N. J.

Number of members and basis of representation, 35.

100 per cent. membership in good standing March 8, 1928.

HUDSON COUNTY. (9)

Society organized October 11, 1851. Meets the first Tuesday in every month. Annual meeting in May.

President.

Woodruff, Stanley R., 16 Enos pl., Jersey City

Vice-President.

Sweeney, William J., 151 49th st., Union City

Secretary.

Pearlberg, Harry J., 921 Bergen av., Jersey City

Treasurer.

Kelley, Charles B., 921 Bergen av., Jersey City

Reporter.

Marshak, M. I., 679 Ave. C, Bayonne

Censors.

Alexander, Hugo, 1029 Garden st., Hoboken
 Luippold, E. J., Weehawken
 Quigley, F. J., Union City
 Williamson, W. L., Bayonne

Adams, Samuel, 29 Highland av., Jersey City
 Adler, Joseph, 933 Ave. C, Bayonne

HUDSON COUNTY.—Continued.

- Ainsley, H. Bryson, 1969 Hudson Blvd., Jer. City
 Alexander, Hugo, 1029 Garden st., Hoboken
 Allen, Isaac L., 521 Palisade av., Union City
 Alpert, Edward, 661 Jersey av., Jersey City
 Andrea, Paul, 52 Warner av., Jersey City
 Arlitz, William J., 107 Newark st., Hoboken
 Ash, Arthur F., 710 Boulevard East, Weehawken
 Audi, Angelo, 221 Central av., Union City
 Auriemma, Michael, 419 Adams st., Hoboken
 Axford, W. H., 840 Boulevard, Bayonne
 Banach, Leon, 2747 Boulevard, Jersey City
 Barbarito, William N., 2671 Boulevard, Jer. City
 Barrett, Arthur F., 835 Fairmount av., Jersey City
 Beachler, Jules, 439 16th av., West New York
 Behrens, Herman, 312 Webster av., Jersey City
 Ben-Asher, Solomon, 277 Bergen av., Jersey City
 Benjamin, Harold C., 59 Creseent av., Jersey City
 Berlin, J. I., 9 Gifford av., Jersey City
 Binder, Joseph, 422 Bergen av., Jersey City
 Blanchard, O. R., 37 Clinton av., Jersey City
 Blakeley, Abram P., 475 Jersey av., Jersey City
 Bortone, Frank, 2765 Boulevard, Jersey City
 Boselli, Emile H., 614 14th st., Union City
 Bowen, Horace, 2787 Boulevard, Jersey City
 Bowyer, Frank F., 50 Gifford av., Jersey City
 Brady, Thos. S., 678 Ave. C, Bayonne
 Brandenburg, Leo W., 4620 Boulevard, Union City
 Braunstein, S. C., 424 13th st., West New York
 Braunstein, Wm. P., 648 Hudson av., Union City
 Brennock, Thos. McG., 3 Webster av., Jersey City
 Brick, G. J., 43 Cottage st., Jersey City
 Brinkerhoff, H. H., 126 Jewett av., Jersey City
 Broesser, H. V., Hoboken Bank for Savings, Hob'n
 Brooke, W. W., 915 Ave. C, Bayonne
 Brozdowski, John J., 554½ Jersey av., Jer. City
 Bruder, A. J., 344 Fairmount av., Jersey City
 Butler, Vincent P., 349 Communipaw av., Jer. City
 Callery, Wm. T., 4 Columbia ter., Weehawken
 Cannon, Edw. A., 5362 Hudson Blvd., N. Bergen
 Caridi, Salvatore, 331 34th st., Woodcliff
 Carr, Mary B., 1 Astor pl., Jersey City
 Chapman, E. J., 203 Danforth av., Jersey City
 Chayes, Sidney, 980 Ave. C, Bayonne
 Child, Frank M., 1222 Bloomfield st., Hoboken
 Choffy, Sylvester A., 160 Bidwell av., Jersey City
 Clark, Chas. Eugene, 462 Bramhall av., Jer. City
 Cobham, James L., 78 Brinkerhoff st., Jersey City
 Cody, Harry C., 283 Ave. C, Bayonne
 Cohen, Harry F., 660 Jersey av., Jersey City
 Cohen, Herman, 489 Jersey av., Jersey City
 Cohen, Herman N., 714 Park av., Hoboken
 Comorato, J. R., 262 Montgomery st., Jer. City
 Comora, Herman, 317 16th st., West New York
 Compagno, Francis A., 424 15th st., Union City
 Connell, Emmet J., 174 Virginia av., Jersey City
 Connell, J., 977 Summit av., Jersey City
 Connell, John N., 55 Lincoln st., Jersey City
 Connolly, Thos. W., Trust Co. of N. J., Bldg., J. C. Conty, Anthony J., 318 48th st., Union City
 Cosgrove, Samuel A., 254 Union st., Jersey City
 Coughlin, T. F., 1006 Park av., Hoboken
 Cracco, Fred A., 51 Palisade av., Union City
 Craig, Burdette, 15 Exchange pl., Jersey City
 Cropper, Chas. W., 2540 Boulevard, Jersey City
 Crowley, Leo F., 148 Belmont av., Jersey City
 Culver, Geo. M., 25 Glenwood av., Jersey City
 Culver, S. Herbert, 75 Magnolia av., Jersey City
 Curtis, Grant P., 312 36th st., Union City
 D'Acerno, P., 346 Palisade av., Union City
 Daly, Bert, 151 Ave. C, Bayonne
 Daly, E. J., 921 Bergen av., Jersey City
 Davey, Thomas N., 41 West 33rd st., Bayonne
 Decker, Clinton L., 40 S. Kingman rd., S. Orange
 DeFuecio, Charles P., 47 Glenwood av., Jersey City
 DeMeritt, C. L., 1225 Bloomfield st., Hoboken
 Dennis, Louis A., 315 Stevens pl., Union City
 De Stanley, Percy, 810 Broad st., Newark
 Dexter, Harriet E. T., 903 Ave. C, Bayonne
 Dickinson, Gordon K., 280 Montgomery st., J. City
 Dillingham, W. I., 431 15th st., West New York
 Dinglestedt, R. H., 68 Hudson st., Hoboken
 Dodson, Louis W., 592 Jersey av., Jersey City
 Dolan, Andrew J., 26 Warner av., Jersey City
 Dolganos, Moses, 862 Ave. C, Bayonne
 Dolmateh, A., 783 Boulevard, Bayonne
 Donohoe, L. F., 140 West 8th st., Bayonne
 Doran, Wm. G., 921 Bergen av., Jersey City
 Draesel, Chas., 509 Highpoint av., Union City
 Duekett, Warren J., 2600 Boulevard, Jersey City
 Duffy, James J., 136 Summit av., Jersey City
 Dukes, H. R., 220 Kearny av., Kearny
 Edgar, Joseph A., 71 Congress st., Jersey City
 Eckes, Joseph, 199 Haneoek av., Jersey City
 Eekert, William, 46 Palisades av., Union City
 Evans, James L., 893 Park av., Woodcliff
 Facciolo, Frank, 562 Boulevard, Bayonne
 Faison, John B., 45 Glenwood av., Jersey City
 Farr, J. C., 75 10th st., Hoboken
 Fauquier, Leonard B., 204 Arlington av., Jer. City
 Feit, Herman, 5 Bentley av., Jersey City
 Ferenczi, Louis J., 33 Edwards st., Bayonne
 Ferguson, C. C., 89 Van Reypen av., Jersey City
 Fineberg, Jacob, 116 Bergen av., Jersey City
 Finger, Frederick A., 938 Avenue C, Bayonne
 Finke, Chas. H., 317 York st., Jersey City
 Finn, Frederick A., 921 Bergen av., Jersey City
 Flaherty, M. E., 36 Glenwood av., Jersey City
 Forman, A. C., 41 W. 32nd st., Bayonne
 Forman, H. S., 640 Bergen av., Jersey City
 Frank, Morris, 921 Ave. C, Bayonne
 Franklin, I. Harold, 191 Palisade av., Jersey City
 Franklin, Louis, 191 Palisade av., Jersey City
 Friele, Wm., 25 Tonnele av., Jersey City
 Frundt, Oscar C., 92 Bartholdi av., Jersey City
 Gardner, John W., 636 Ocean av., Jersey City
 Gerstley, Mamfred, 2787 Boulevard, Jersey City
 Gille, Hugo, 149 Congress st., Jersey City
 Ginsberg, George, 624 Bloomfield av., Hoboken
 Goldberg, E. H., 238 Kearny av., Kearny
 Good, George, 949 Park av., Union City
 Gordon, I. L., 1815 Boulevard, Jersey City
 Goudy, E. S., 187 Kearny av., Kearny
 Gould, J. H., 696 Ave. C, Bayonne
 Granelli, M. S., 68 Hudson st., Hoboken
 Greene, Albert D., 195 Palisade av., Union City
 Greissing, Karl, 422 20th st., West New York
 Halligan, Earl J., 254 Montgomery st., Jersey City
 Halpern, Sophia L., 271 Palisade av., Union City
 Hamill, P. J., 50 Journal Square, Jersey City
 Hardenberg, D. S., 347 Communipaw av., J. City
 Harter, Louis F., 174 Bowers st., Jersey City
 Harvey, John W., 40 W. 35th st., Bayonne
 Hasking, Arthur P., 318 Montgomery st., Jer. City
 Heilbrunn, Julius, 2787 Boulevard, Jersey City
 Heintzelman, B. S., 19 W. 33rd st., Bayonne
 Hekimian, J. H., 468 Palisade av., Weehawken
 Herradora, J. R. Hud. Co. Tub. San., Secaucus
 Higgins, G. L., 175 Ocean av., Jersey City
 Higgins, Thomas A., 565 Summit av., Jersey City
 Hill, William F., 108 Grand st., Jersey City.
 Hoening Charles L., 928 Hudson st., Hoboken
 Hoffman, P. 2683 Boulevard, Jersey City
 Holloway, J. Morgan, 633 Bergen av., Jersey City
 Hommell, P. E., 689 Bergen av., Jersey City
 Hoops, Harold J., 167 Ege av., Jersey City
 Hotwet, H. Ameroy, 4 Clifton ter., Weehawken
 Hunt, J. Jay, 997 Ave. C, Bayonne
 Introcaso, D. A., 45 Creseent av., Jersey City
 Jaeks, Oscar, 476 Mercer st., Jersey City
 Jaffin, A. E., 41 Emory st., Jersey City

HUDSON COUNTY.—Continued.

- Jacques, J. Eugenia, 74 Waverly st., Jersey City
 Jentz, John H., 980 Summit av., Jersey City
 Jones, J. M., 295 Prospect st., Ridgewood
 Justin, Arthur W., 41 Fulton st., Weehawken
 Justin, J. Clement, 1074 Dearborn rd., Palisade
 Keegan, Thos. D., 135 Arlington av., Jersey City
 Kearney, John V., 372 Bergenline av., Union City
 Kelley, Chas B., Trust Co., of N. J. Bldg., Jer City
 Kelly, Bernard S., 203 Harrison av., Jersey City
 King, Geo. W., Hud. Co. Hos. for insane, Secaucus
 Klaus, Henry, 435 Palisade av., Union City
 Klugman, Louis W., 375 Avenue C, Bayonne
 Kolb, J. M., 725 Syms st., Union City
 Kooperman, B., 321 16th st., West New York
 Koppel, Joseph, 921 Bergen av., Jersey City
 Koppel, Leo A., 921 Bergen av., Jersey City
 Kresch, Philip, 42 W. 22nd st., Bayonne
 Kuehne, Richard, 1118 Summit av., Jersey City
 Kuhlman, Alvin E., 525 Union pl., Union City
 Lambert, F. E., 157 Ocean av., Jersey City
 Lange, Louis C., 20 Clifton ter., Weehawken
 Largay, Arthur O., 929 Avenue C, Bayonne
 Larkey, Charles J., 700 Ave. C, Bayonne
 Lawing, G. Conde, 443 22nd st., West New York
 Leining, Albert, 1 4th st., Weehawken
 Lemmerz, Theodore H., 141 Magnolia av., Jer. City
 Levine, Isreal, 106 Bowers st., Jersey City
 Lewis, Livingston L., 712 Washington st., Hoboken
 Limeburner, C. A., 95 Linwood av., Ridgefield
 Linden, Mortimer, H., 45 Clendenny av., Jer. City
 Lindenbaum, H., 2707 S. Norm'die, L. Angeles, Cal.
 Londrigan, Jos. F., 327 Washington st., Hoboken
 Long, Miles T., 226 Monticello av., Jersey City
 Luippold, E. J., 85 Col. ter., Weehawken
 Lupin, Edward E., 727 Ave. C, Bayonne
 Lynch, Roland J., 93 Fairview av., Jersey City
 Mackey, Margaret, Stegman P'kw'y, Jersey City
 Magner, James P., 726 Ave. C, Bayonne
 Maras, Peter E., 80 Tonnele av., Jersey City
 Mallalieu, Frank W., 16 Monticello av., Jer. City
 Markowitz, Irwin, 2157 Boulevard, Jersey City
 Marks, David M., 298 Fourth st., Jersey City
 Marshak, Martin I., 679 Ave. C, Bayonne
 Matera, Joseph, 506 Garden st., Hoboken
 Mathews, Wm. J., 938 Hudson st., Hoboken
 Maturo, V. E., 816 Boulevard, Bayonne
 Maver, Wm. W., 532 Bergen av., Jersey City
 McDede, J. Searle, 215 Ege av., Jersey City
 McDonald, F. R., 345 Communipaw av., Jer. City
 McLaughlin, Geo. E., 765 Summit av., Jersey City
 McLean, Herbert E., 92 Fairview av., Jersey City
 McLean, Hugh A., 414 17th st., West New York
 McLean, John J., 92 Fairview av., Jersey City
 McLoughlin, Frank J., 558 Jersey av., Jersey City
 McNenney, Claude E., 113 Fairview av., Jer. City
 Mead, Walter G., 699 Kearny av., Arlington
 Meltner, Louis, 908 Hudson st., Hoboken
 Mendelsohn, Lewis, 272 Montgomery st., Jer. City
 Mersheimer, Christ. H., 15 Reservoir av., Jer. City
 Meyer, Wm., 436 New York av., Union City
 Meyerson, Noah, 323 16th st., West New York
 Miller, M. H., 311 16th st., West New York
 Miner, Donald, 921 Bergen av., Jersey City
 Morley, Grace C., 1000 Hudson st., Hoboken
 Mooney, Thomas, 137 Ridge rd., No. Arlington
 Mount, Elmer M., 76 Sherman pl., Jersey City
 Mueller, George H., 102 Summit av., Jersey City
 Murphy, Leo J., 374 West st., Union City
 Murphy, James M., 2753 Boulevard, Jersey City
 Muttart, George W., 702 Ocean av., Jersey City
 Mutter, Alfred A., 75 Beech st., Kearny
 Nalitt, David I., 28 W. 33rd st., Bayonne
 Nay, Chas. L., 164 Palisade av., Jersey City
 Nelson, Aaron, 461 Jersey av., Jersey City
 Neves, Charles S., 281 Park av., Montclair
 Nevin, Joseph A., 185 Bowers st., Jersey City
 Nevin, John, 921 Bergen av., Jersey City
 Newman, Abraham J., 42 Sherman pl., Jersey City
 Nichols, G. Louis, 723 Washington st., Hoboken
 Nicholson, Frank P., 895 Summit av., Jersey City
 Niemeyer, Chas. V., 4610 Boulev'd, Weehawken
 Norton, James F., 299 Varick st., Jersey City
 Nuse, Edward F., 550½ Jersey av., Jersey City
 O'Connor, B. A., 314 North 4th st., Harrison
 O'Connor, James F., 284 Chestnut st., Kearny
 O'Connor, John J., 434 Clinton av., Union City
 Oestmann, A. W., 932 Summit av., Jer. City Hgts.
 O'Grady, B. J., 327 Washington av., Hoboken
 O'Hanlon, George, Jersey City Hosp., Jersey City
 Older, Benj., 435 Clinton av., Union City
 Olpp, A. E., 412 15th st., Union City
 O'Neill, John H., 270 Montgomery st., Jersey City
 Opydke, C. P., 2633 Boulevard, Jersey City
 Opydke, L. A., 55 Clinton av., Jersey City
 Oshrin, Henry, 760 Palisade av., West New York
 Ovens, R. C., 675 Bergen av., Jersey City
 Paganelli, T. R., 1006 Garden st., Hoboken
 Pagliughi, J. J., 401 18th st., Union City
 Pearlstein, Frank, 325 16th st., West New York
 Perkel, Louis L., 3263 Boulevard, Jersey City
 Pellarin, John D., 493 Clinton av., Union City
 Pentel, Louis S., 307 16th st., West New York
 Perlberg, Harry J., 921 Bergen av., Jersey City
 Peters, Chas. M., 921 Bergen av., Jersey City
 Peters, E. A. P., 394 Bergen av., Jersey City
 Pindar, David B., 1100 Bloomfield st., Hoboken
 Pindar, Fred S., 960 Park av., Woodcliff
 Pindar, W. A., 975 Broadway, Woodcliff
 Pinkerton, Wm. A., 854 Ave. C, Bayonne
 Piskorski, Abdon V., 604 Jersey av., Jersey City
 Pollak, B. S., Hud. Co. Tbc. Hos. & San., Secaucus
 Pontery, Herbert, 89 Bowers st., Jersey City
 Poole, V. T., 72 Edgewater pl., Edgewater
 Povalski, Alex. W. T., 320 York st., Jersey City
 Purdy, Chas. H., 35 Highland av., Jersey City
 Pyle, Louis A., 89 Fairview av., Jersey City
 Pyle, Wallace, 15 Exchange pl., Jersey City
 Pyle, Wm. L., 678 Bergen av., Jersey City
 Quigley, Frederick J., 4622 Boulevard, Union City
 Rector, Joseph M., 681 Bergen av., Jersey City
 Reich, S. A., 972 Summit av., Jersey City
 Reid, John W., 1 Kearny av., Kearny
 Reingold, Alexander, 221 Garden st., Hoboken
 Reitnaeuer, John S., 518 Columbia st., Union City
 Rieck, Walter R., 377 Kearny av., Arlington
 Rieman, Aloysius, 3504 Hudson Blvd., Jersey City
 Riha, Wm. W., 835 Ave. C, Bayonne
 Roberts, Edgar W., 21st st. & Palisade av., W.N.Y.
 Robbins, Henry B., 144 Mercer st., Jersey City
 Roselli, Emile H., 614 15th st., Union City
 Rosenberg, Albert B., 1912 Boulevard, Jer. City
 Rosenberg, J., 692 Bergen av., Jersey City
 Rosencrans, James H., 826 Hudson st., Hoboken
 Rosenstein, Jacob L., 568 Bergen av., Jersey City
 Rowe, Norman L., 828 Grand st., Jersey City
 Rundlett, Emelia V., 79 Prospect st., Jersey City
 Ruoff, Andrew C., 494 New York av., Union City
 Russell, David L., 690 Bergen av., Jersey City
 Ruvane, J. J., 2680 Boulevard, Jersey City
 Sacco, Anthony G., 440 New York av., Union City
 Santangelo, Stephen, 3170 Boulevard, Jersey City
 Santosky, Benj. B., 162 Bergen av., Jersey City
 Schapiro, Joseph, 712 Palisade av., Union City
 Schlein, August, 707 Park av., Hoboken
 Schept, Samuel S., 523 37th st., Union City
 Schück, Traugott E., 58 9th st., Hoboken
 Schulman, A. S., 4620 Boulevard, Union City
 Schwarz, B. T. D., 2801 Hudson Boulevard, J. City
 Schwarz, Henry J., 5560 Hudson Blvd., N. Hudson
 Schwarz, W. J. A., 334 7th st., Jersey City

HUDSON COUNTY.—Continued.

- Scott, Samuel G., 674 Bergen av., Jersey City
 Scott, G. V., 42 Boyd av., Jersey City
 Selinger, S., 413 16th st., West New York
 Sexsmith, George H., 719 Ave. C, Bayonne
 Shapiro, Maurice, 921 Ave. C, Bayonne
 Shipman, Frank C., 3663 Boulevard, Jersey City
 Shook, B. E., 166 Bergen av., Jersey City
 Shulman, Nathan L., 527 Fulton st., Union City
 Siegler, Julius, 646 Bergen av., Jersey City
 Sirken, Charles, 887 Summit av., Jersey City
 Smith, J. S., 765 Ave. C, Bayonne
 Snyder, J. E. C., 1023 Garden st., Hoboken
 Solomon, David, 18 W. 22nd st., Bayonne
 Spalding, H. J., 512 45 th st., Union City
 Spano, Frank, 912 Hudson av., Union City
 Spath, George B., 722 Hudson st., Hoboken
 Spence, Henry, 123 Fairview av., Jersey City
 Sprague, Seth B., 301 York st., Jersey City
 Squier, Marcus F., 4 Pleasant pl., Arlington
 Steadman, E. T., 107 Christopher st., Montclair
 Stein, Jacob M., 68 Columbia ter., Weehawken
 Stellwagon, F. B., 28 Clifton ter., Weehawken
 Stockfisch, Robt., 3644 Boulevard, Jersey City
 Stout, J. P., 165 Jewett st., Jersey City
 Street, D. B., 27 Woodlawn av., Jersey City
 Stuart, William C., 107 Newark st., Hoboken
 Sullivan, George F., 510 Hudson st., Hoboken
 Sullivan, James A., 668 Jersey av., Jersey City
 Sullivan, Margaret N., 2600 Boulevard, Jer City
 Sulouff, S. Henry, Rm. 18, Five Cor. Bldg., Jer. City
 Sweeney, William J., 151 49th st., Union City
 Swiney, Merrill A., 325 Ave. C, Bayonne
 Tataryan, H., 422 New York av., Union City
 Temes, J. Howard, 2280 Boulevard, Jersey City
 Turk, A. P., 381 Palisade av., Union City
 Thomas, Ralph B., 793 Montgomery st., Jer. City
 Thum, Ernest, 819 Ave. C, Bayonne
 Tidwell, H. F., 229 16th st., West New York
 Timlin, James, 64 Beech st., Arlington
 Tyndall, Hugh H., 83 Highwood ter., Weehawken
 Updyke, Fannie B., 31 Second st., Weehawken
 Urevitz, Abraham, 495 Clinton av., Union City
 Visconti, Jos. A., 808 Garden st., Jersey City
 Vitale, Dominic V., 646 Palisade av., W. N. Y.
 von Deesten, Henry T., 618 Grand st., Hoboken
 Vostrosablin, Nicholas A., 121 Grand st., Jer. City
 Vreeland, Hamilton, Ridgewood
 Vreeland, William N., 32 Bergen av., Jersey City
 Wainwright, J. M. B., 256 Montgomery st., J. City
 Waters, Edward G., 123 Jewett av., Jersey City
 Ward, L. Joseph, 115 Jefferson av., Elizabeth
 Ward, J. V., 390 Palisade av., Jersey City
 Weber, Walter D., 305 Oak st., Union City
 Wechsler, Joseph, 3460 Boulevard, Jersey City
 Weigele, Carl E., 147 Garrison av., Jersey City
 Weiss, Abram, 633 Pleasant av., Union City
 Weiss, M. J., 734 Ave. C, Bayonne
 Wheeler, James A., 304 Academy st., Jersey City
 White, Hugh M., 901 Summit av., Jersey City
 White, Thomas J., 221 Union st., Jersey City
 Wilkinson, George, 542 Bergen av., Jersey City
 Williamson, W. L., 22 West 22nd st., Bayonne
 Willis, John, 536 Summit av., Jersey City
 Winter, Daniel T., Jr., 8 Gifford av., Jersey City
 Woelfle, Henry E., 907 Summit av., Jersey City
 Wolff, Ferd. C., 1109 Garden st., Hoboken
 Woodruff, S. A., 16 Enos pl., Jersey City
 Yeaton, W. L., 204 11th st., Hoboken
 Zenneck, J. F., 38 King av., Weehawken
 Zitani, Alfred M., 501 Grant st., Hoboken

Resigned.

Gelbach, Wm., R.
 Kudlich, Wm. L.

Transferred

Dilger, F. C., to Bergen County

Total membership and basis of representation,
 366.

100 per cent. paid up March 8, 1928.
 *Deceased.

HUNTERDON COUNTY. (10)

Society organized June 12, 1821. Meets third Tuesday in April and October. Annual meeting in October.

President.

Hamilton, L. A., Lambertville

Vice-President.

Fulper, T. B., Hampton

Secretary.

Salmon, Leon T., Lambertville

Treasurer.

Closson, Edward W., Lambertville

Reporter.

Salmon, Leon T., Lambertville

Censors.

Closson, Edward W., Lambertville

Salmon, Leon T., Lambertville

Apgar, Francis A., Oldwick
 Boyer, Charles G., Annandale
 Clark, Frank G., White House Station
 Closson, Edward W., Lambertville

Chamberlain, John L., Sergeantsville
 Coleman, Austin H., Clinton
 Decker, Frederick H., Frenchtown
 English, Samuel B., Glen Gardner
 Fuhrmann, Barclay Stokes, Flemington
 Fulper, Theodore B., Hampton
 Hamilton, Lloyd A., Lambertville
 Harmon, Byron M., Essex Co., Sanitarium, Verona
 Harmon, Harry M., Frenchtown
 Heil, A. Arling, Milford
 Henry, George, Flemington
 Leaver, Morris H., Quakertown
 Low, Frederick C., High Bridge
 Rufe, John J., High Bridge
 Salmon, Leon T., Lambertville
 Tompkins, Grenelle B., Flemington
 Williams, Louis C., Lambertville
 *Young, Peter C., Ringoes

Honorary Members.

Sommer, George N. J., Trenton
 Wolverton, W. D., U. S. A., Ret., Quakertown

Number of members and basis of representa-
 tion, 21.

*Deceased.

MERCER COUNTY. (11)

Society organized May 23, 1848. Meets second Wednesday in each month except July, August and September. Annual meeting in December.

President.

Sista, Charles R., 476 Hamilton av., Trenton

Vice-President.

Seely, Roy B., 78 N. Clinton av., Trenton

Secretary and Reporter.

Hutchinson, A. Dunbar, Trenton

Treasurer.

North, Harry R., Trenton

Censors.

Sommer, George N. J., Trenton

Craythorn, C. J., Trenton

Schauffler, William G., Princeton

Ackley, David B., 21 N. Clinton av., Trenton
 Adams, Chas. F., 34 W. State st., Trenton
 Applegate, Edw. T. R., 1125 Greenw'd av., Trenton
 Arthur, Francis M., Hamilton Square, N. J.
 Atkinson, Alvan W., 423 E. State st., Trenton
 Barrows, Arthur M., 440 Hamilton av., Trenton
 Beairsto, E. B., 495 Pennington av., Trenton
 Beatty, Henry M., 50 Centre st., Trenton
 Bellis, Horace D., 437 E. State st., Trenton
 Belting, Arthur W., Aleda Apartments, Trenton
 Bergen, Elston, H., 25 Mercer st., Princeton
 Berger, Harry, 921 Clinton av., Trenton
 Berman, Jacob J., 409 Market st., Trenton
 Blackwell, Enouch, Trenton Trust Bldg., Trenton
 Blaugrund, Samuel, 553 Broad st., Trenton
 Blum, Joseph M., 123 Mill st., Trenton
 Bowman, A. K., 272 Nassau st., Princeton
 Carnochan, J. McD., 34 Mercer st., Princeton
 Child, Florence C., 317 City Hall, Trenton
 Chianese, C. Chester, 461 Hamilton av., Trenton
 Clark, William A., 140 W. State st., Trenton
 Collier, Wm. S., 1000 S. Broad st., Trenton
 Collins, Henry J., 1160 Hamilton av., Trenton
 Connelly, John A., 212 W. State st., Trenton
 Comfort, John B., 50 S. Clinton av., Trenton
 Corio, Geo. A., 309 Clinton av., Trenton
 Corrigan, Patrick H., 1720 Broad st., Trenton
 Costill, Henry B., 371 Hamilton av., Trenton
 Cotton, Henry A., State Hospital, Trenton
 Cottone, R. J., 683 Princeton av., Trenton
 Crane, J. Welling, State Prison, Trenton
 Craythorn, Chas. J., 302 W. State st., Trenton
 D'Arcy, Walter E., 545 E. State st., Trenton
 Davidson, Royden W., 200 W. State st., Trenton
 Denelsbeck, J. Otis, 878 E. State st., Trenton
 Douress, Philip C., 802 E. State st., Trenton
 Epstein, Harry H., 225 Perry st., Trenton
 Ernest, Richard B., 240 W. State st., Trenton
 Fee, Elam K., Main st., Lawrenceville, N. J.
 Fell, Alton S., 529 E. State st., Trenton
 Franklin, C. C., 1109 Hamilton av., Trenton
 Friedmann, Leonard L., 486 Princeton av., Trenton
 Fuchs, Jacob N., 836 S. Broad st., Trenton
 Funkhouser, Edgar B., State Hospital, Trenton
 Gariss, Joseph L., 34 W. State st., Trenton
 Gibbs, Jonathan C., 34 Spring st., Trenton
 Goldberg, Benjamin M., 1156 E. State st., Trenton
 Gordon, Clark H., 808 State st., Trenton
 Haggerty, Daniel L., 227 N. Warren st., Trenton
 Hall, Wm. J., 438 E. State st., Trenton
 Harman, Wm. J., 190 W. State st., Trenton
 Higgins, Joseph F., 607 Center st., Trenton
 Hutchinson, A. D., 913 W. State st., Trenton
 Iams, Samuel H., 34 Mercer st., Princeton
 Ivins, Wm. C., 214 E. Hanover st., Trenton
 Jaspán, Samuel C., 820 Division st., Trenton
 Kent, Morton M., 233 N. Warren st., Trenton
 Koplín, Nathan H., 142 W. State st., Trenton
 Kuhl, Paul E., 48 N. Clinton av., Trenton
 Lavine, Barney D., 630 N. Clinton av., Trenton
 Levin, Louis, 140 W. State st., Trenton
 Little, William R., Pennington, N. J.
 MacDermid, Lynden E., Main st., Hightstown
 Macfarland, Burr W., Broad St. Bk. Bldg., Trenton
 MacLaren, Wm. S., 35 Boudinot st., Princeton
 Madden, Walter F., 324 S. Broad st., Trenton
 McCollough, John H., 523 E. State st., Trenton
 McDonald, John O., 194 W. State st., Trenton
 McGuire, Jas. J., 122 W. State st., Trenton
 Means, P. B., State Hospital, Trenton
 Mitchell, Chas. H., 1100 W. State st., Trenton
 *Moore, Geo. R., 130 W. State st., Trenton
 Moore, Robert H., 86 Beechwood av., Trenton
 Mras, J. N., State Hospital, Trenton
 North, Harry R., 160 W. State st., Trenton
 Oliphant, Nelson B., 152 W. State st., Trenton
 O'Rourke, James J., 871 Stuyvesant av., Trenton
 Pantaleone, Raffaele, 504 Hamilton av., Trenton
 Parker, H. Norton, 72 N. Clinton av., Trenton
 Pessel, J. F., 192 W. State st., Trenton
 Philips, Robt. H. C., 144 W. State st., Trenton
 Pierson, Carl L., State Hospital, Trenton
 Pierson, Theodore A., Hopwell, N. J.
 Powis, Ethel M., 198 W. State st., Trenton
 Proctor, Francis E., 1245 Greenwood av., Trenton
 Purcell, Ernest F., 800 Stuyvesant, Trenton
 Read, Clinton H., 567 S. Warren st., Trenton
 Reddan, Martin W., 126 W. State st., Trenton
 Richards, J. N., Trenton
 Rogers, Alvin S., 126 N. Warren st., Trenton
 Rogers, Lawrence H., Municipal Colony, Trenton
 Rogers, W. N., 1235 Brunswick av., Trenton
 Rowan, Henry M., 126 W. State st., Trenton
 Scammell, Frank G., 40 S. Clinton av., Trenton
 Schauffler, Wm. G., 21 Morgan pl., Princeton
 Schildkraut, Jacob M., 170 W. State st., Trenton
 Schoening, Gustave A., 148 N. Clinton, Trenton
 Seely, Roy B., 78 N. Clinton, Trenton
 Seibert, Raymond S., 359 Hamilton av., Trenton
 Seitzick, Hannah E., 733 Hamilton av., Trenton
 Shaw, Jos. B., 119 S. Warren st., Trenton
 Sica, Samuel, 431 E. State st., Trenton
 Sill, John B., 1129 Hamilton av., Trenton
 Sinclair, Donald B., Princeton
 Silver, E. Drew, Hightstown
 Silver, George A., Hightstown
 Sinton, John Y., Imlaystown
 Sista, Chas. R., 476 Hamilton av., Trenton
 Slack, Clarence J., 230 W. State st., Trenton
 Smith, Houghton, 1063 S. Clinton av., Trenton
 Smith, W. Henly, 128 State st., Trenton
 Sommer, Geo. N. J., 120 W. State st., Trenton
 Stone, R. G., State Hospital, Trenton
 Summers, A. D., Princeton
 Swern, Nathan, 302 Mulberry st., Trenton
 Taylor, Walter A., 450 Rutherford av., Trenton
 Tooker, Norman B., Princeton
 Traub, Paul, 27 Richey pl., Trenton
 Treiber, Benj. A., 626 Perry st., Trenton
 Turner, Irvine F. P., Broad st., Bk. Bldg., Trenton
 Vaczi, Stephen, 801 Broad st., Trenton
 Van Neste, George V., Hopewell, N. J.
 Vannemen, Joseph S., Princeton
 Waters, Chas. H., 126 W. State st., Trenton
 Watson, Fred S., 811 Stuyvesant av., Trenton
 Watts, Wilbur, 406 E. State st., Trenton
 West, Edgar L., 443 E. State st., Trenton
 Wiesler, Howard, 491 Centre st., Trenton
 Wilbur, William Lane, Hightstown

MERCER COUNTY.—Continued.

Williams, Geo. W., 217 N. Warren st., Trenton
 Williams, Harry D., 527 E. State st., Trenton
 Wright, Howard E., Princeton
 Yaeger, Leslie A., 470 Hamilton av., Trenton
 Yazujian, Dikran M., 562 E. State st., Trenton
 Zandt, Frederick B., Hamilton sq., Trenton

Honorary Members.

Simpson, Maxwell S., Titusville, N. J.
 Armstrong, Alexander, White Haven, Penn.

Resigned.

Cuthrie, C. G., Princeton
 Alsop, Thomas, Princeton
 Rosenthal, L. V., moved to Brooklyn

Number of members and basis of representation, 134

100 per cent. of membership in good standing
 March 8, 1928.

*Deceased.

MIDDLESEX COUNTY. (12)

Society organized June 16, 1816. Meets third Wednesday in every month except July, August and September.
 Annual meeting in December.

President.

Henry, F. C., Jr., Perth Amboy

Vice-President.

Hoffman, F. M., New Brunswick

Secretary and Reporter.

Gutowski, J. M., Perth Amboy

Treasurer.

Johnson, Frank C., New Brunswick

Anderson, John F., 195 College av., N. Brunswick
 Applegate, Grov. T., 88 Schureman, N. Brunswick
 Basset, Lavern C., 320 New Market rd., Dunellen
 Beekman, Jesse H., Sayerville
 Berkow, Samuel G., 138 Market st., Perth Amboy
 Brody, Morton S., 84 Bayard st., New Brunswick
 Brown, Fred. L., 67 Livingston av., N. Brunswick
 Burnett, Charles B., Main st., South River
 Carroll, Edgar, Main st., Dayton
 Clark, A. S., 614 Park av., New York City
 Clarke, F. M., 47 Paterson st., New Brunswick
 Coble, Morris S., 437 State st., Perth Amboy
 Collins, James J., Main st., Woodbridge
 Condon, Wm. Jos., 50 Livingston av., N. Brunswick
 Cottrell, Judson S., 159 Market st., Perth Amboy
 Coughlin, F. C., 419 George st., New Brunswick
 Cronk, E. Irving, Livingston av., New Brunswick
 Devan, T. A., University Hosp., Rochester, N. Y.
 Dix, J. Morgan, 344 Main st., Metuchen
 Ellis, Alfred L., 169 Maple av., Metuchen
 Fagan, Jas. L., 419 George st., New Brunswick
 Fa Nelli, Antonio, 469 Lowrie st., Perth Amboy
 Faulkingham, R. J., 61 Liv'gston av., N. Brunswick
 Feher, L. A. M., 196 Somerset st., N. Brunswick
 Fithian, Geo. W., 266 High st., Perth Amboy
 Forney, Norman N., Main st., Milltown
 Gauzza, Valentine P., Fords
 Grieve, James, 88 Market st., Perth Amboy
 Gruessner, Anth'y, 153 Somerset st., N. Brunswick
 Gutmann, Benjamin, 116 Livingston av., N. Brunswick
 Gutowski, Jos. M., 338 High st., Perth Amboy
 Hay, Joseph S., 255 High st., Perth Amboy
 Haight, Harry W., Highland Park, N. Brunswick
 Haywood, Harry, 3 Elm Row, New Brunswick
 Henry, Frank C., 254 State st., Perth Amboy
 Henry, Frank C., Jr., 254 State st., Perth Amboy
 Hofer, Clarence A., Metuchen
 Howley, Barth M., 419 George st., N. Brunswick
 Hoffman, Florentine M., 91 Bay'd st., N. Brunswick
 Hunt, A. Clark, 625 Middlesex av., Metuchen
 Hunt, Melvin M., 16 Jackson st., South River
 Johnson, Frank C., 62 Bayard st., N. Brunswick
 Karshmer, Nathan, 422 George st., New Brunswick
 Kemeny, Imre, Carteret
 King, Alden P., Milltown
 Kinney, Seldon T., 250 Main st., South Amboy
 Klein, Edward F., 136 Market st., Perth Amboy
 Klein, William, 85 Bayard st., New Brunswick
 Kramer, S. E., 121 Market st., Perth Amboy

Leonard, Geo. F., 63 N. 5th av., New Brunswick
 Long, Pauline A., Liv'gston av., New Brunswick
 Longbothum, George T., Dunellen av., Dunellen
 London, William, 256 State st., Perth Amboy
 Lund, John L., 267 High st., Perth Amboy
 MacDowell, John L., 113 Market st., Perth Amboy
 Mann, Jacob J., 255 State st., Perth Amboy
 Mark, Joseph, 102 Green st., Woodbridge
 McCormick, Wm. M., 266 Market st., Perth Amboy
 McGovern, John F., 24 Livingston av., N. Brunswick
 McKiernan, Robt. L., 97 Bayard st., N. Brunswick
 McLeod, N. S., 418 George st., New Brunswick
 Meacham, Eugene A., Stevens av., South Amboy
 Meinzer, Martin S., 284 Madison av., Perth Amboy
 Merrill, Chas. F., Highland Park, N. Brunswick
 Messinger, Samuel J., Chrome
 Morrison, Daniel L., 92 Carroll pl., N. Brunswick
 Nafey, Herbert W., Highland Park, N. Brunswick
 Naulty, Chas. W., Jr., 403 High st., Perth Amboy
 *Nemser, Rudolph W., Jamesburg
 Pansay, Abraham A., 12 Jackson st., South River
 Platt, Thomas H., 208 Dunellen av., Dunellen
 Ramsey, William E., 240 High st., Perth Amboy
 Reason, John J., Roosevelt
 Rice, J. Warren, 14 Kirkp't'k st., New Brunswick
 Riva, Fred S., Milltown
 Rona, Maurice, 159 Bayard st., New Brunswick
 Rothschild, Karl, 49 Bayard st., New Brunswick
 Rowland, John H., 159 New st., New Brunswick
 Runyon, Lawrence P., 82 Somerset st., N. Brunswick
 Saulsberry, C. E., 75 Livingston st., N. Brunswick
 Scott, Fred W., 103 Bayard st., New Brunswick
 Selover, Sarah E., Main st., South River
 Schureman, John P., 92 Bayard st., N. Brunswick
 Sherman, W. E., George & Schureman, N. Brunswick
 Shull, J. Virgil, 320 High st., Perth Amboy
 Silk, Chas. L., 189 Rector st., Perth Amboy
 Sirott, Barnett H., 409 State st., Perth Amboy
 Slobodien, Benjamin F., 143 Smith st., P. Amboy
 Smith, Arthur L., 62 Bayard st., New Brunswick
 Smith, J. Vincent, 463 State st., Perth Amboy
 Spencer, Ira T., Main st., Woodbridge
 Steffeni, Chas. T., Dunellen
 Sullivan, Chas. J., 57 Paterson st., N. Brunswick
 Suydam, John L., Church st., Jamesburg
 Tyrrell, George W., 380 State st., Perth Amboy
 Urbanski, Adrian X., 148 Market st., P. Amboy
 Urbanski, Matt. F., 314 Washington st., P. Amboy
 Van Dyke, Benjamin S., Cranbury
 Voorhees, Howard C., 43 Bayard st., N. Brunswick
 Walker, R. B., 1st av., Highland Park
 Wantoch, Joseph, Carteret
 Weber, J. Francis, 264 Main st., South Amboy
 Wetterberg, Louis F., 241 State st., Perth Amboy
 Wilentz, Wm. C., 188 Market st., Perth Amboy
 Wilson, John G., 280 High st., Perth Amboy
 Woods, A. Lincoln, Main st., South River

Number of members and basis of representation, 105.

100 per cent. paid up March 8, 1928.

*Deceased.

MONMOUTH COUNTY. (13)

Society organized June 1, 1816. Meets second Wednesday in each month. Annual meeting in December.

President.

Clayton, John C., Freehold

Vice-President.

Campbell, William K., Long Branch

Secretary.

Featherston, D. F., Asbury Park

Treasurer.

Watkins, Robert E., Belmar

Reporter.

Altschul, F. J., Long Branch

Censors.

Ingling, H. W., Freehold

Hartman, H. W., Keyport

Herrman, Wm. C., Asbury Park

Ackerman, Joseph H. 404 Asbury av., Asbury Pk

Ackerman, J. F., 1010 Grand av., Asbury Park

Altschul, Frank Jos., 126 Garfield av., L. Branch

Anderson, William Edgar, Englishtown

Appelgate, Asher T., Englishtown

Bariscillo, John J., 928 Bangs av., Asbury Park

Beach, Edward M., West Long Branch

Bennett, R. S., 516 Asbury av., Asbury Park

Beveridge, Wm. W., 1000 Grand av., Asbury Park

Blaisdell, C. Bryon, 48 Norwood av., Long Branch

Brown, Harvey S., Freehold

Bryan, Joseph H., 221 Asbury av., Asbury Park

Bulwinkle, Frederick, Atlantic Highlands

Campbell, Wm. K., 69 Third av., Long Branch

Cassidy, S. H., Keyport

Clayton, John C., Freehold

Cooley, H. S., 58 Front st., Keyport

DePons, S. C., 30 Reckless pl., Red Bank

Donovan, William F., Brielle

Dorr, Henry B., Main av., Ocean Grove

Fairbanks, Warren H., Freehold

Fisher, James A., Fitkin Building, Asbury Park

Featherston, Daniel F., 506 4th av., Asbury Park

Garrison, B. H., 23 Monmouth st., Red Bank

Gesswein, Carl A., Keyport

Goff, F. J., 68 Maple av., Red Bank

Gosling, W. W., 23 Monmouth av., Red Bank

Guilliam, Wm. H., 504 Fourth av., Asbury Park

Hartman, H. W., Keyport

Hepburn, William M., Freehold

Herrman, Wm. G., Fitkin Building, Asbury Park
Hill, J. A., Allenhurst

Holters, Otto R., 515 2nd av., Asbury Park

Ingling, Harry W., Freehold

Jamison, Wm. F., Bradley Beach

Jordan, J. C., Manasquan

Kazmann, Harold A., 406 Broadway, Long Branch

Knight, Samuel R., 212 Jersey av., Spring Lake

Leighton, Robt. L., 401 Ludlow av., Spring Lake

Leonard, Lothair L., 615 Asbury av., Asbury Park

Lovett, Irving K., 15 Wallace, Red Bank

Makin, J. B., Fitkin Bldg., Asbury Park

Manahan, D. V., Monmouth Beach

Moffat, Barclay W., 76 W. Front st., Red Bank

Nichols, Stanley H., Fitkin Building, Asbury Park

Parry, O. K., Kinmouth Bldg., Asbury Park

Peteler, Alois, Keyport

Podel, A. Alfred, Red Bank

Pons, C. A., 112 Broad st., Red Bank

Prout, Chas. D., 414 Sunset av., Asbury Park

Reed, James J., Rumson

Rowland, James J., Highlands

Rullman, Walter A., 58 W. Front st., Red Bank

Sayre, William D., 69 Maple av., Red Bank

Scott, Elmer A., 40 E. Front st., Red Bank

Slocum, Harry B., Bath av., Long Branch

Strahan, F. G., 473 Broadway, Long Branch

Straughan, C. C., 23 Monmouth st., Red Bank

Strauss, Arthur, 137 Pavil av., Long Branch

Tilton, W. S., Asbury Trust Co. Bldg., Asbury Pk

Traverso, Daniel, Belmar

Trippe, Clarence M., 702 Asbury av., Asbury Park

Upham, Helen T., 305 Third av., Asbury Park

Van Mater, John H., 9 2nd av., Atlantic Highlands

Van Oehsen, W. H., Bradley Beach

Wagner, Earl C., Pitkin Bldg., Asbury Park

Warner, George Van V., 76 E. Front st., Red Bank

Watkins, Robert E., 517 5th av., Belmar

Weiner, J. R., Bangs av., Asbury Park

Wilbur, Franklin L., 711 Grand av., Asbury Park

Wilson, Robert B., 86 Broad st., Red Bank

Wise, Lester D., 119 Morris av., Long Branch

Honorary Members.

Disbrow, Vanderhoff M., Lakewood

Wooley, Scudder J., New York City

Number of members and basis of representation, 72

100 per cent. paid up March 8, 1928.

MORRIS COUNTY. (14)

Society organized in 1816. Meets the second Tuesday of March, June, September and December. Two or more special meetings during the year. Annual meeting in September.

President.

Havens, Samuel C., 14 Elm st., Morristown

Vice-President.

Mial, Leonidas L., 38 Elm st., Morristown

Secretary.

Lathrope, George H., 1019 Broad st., Newark

Treasurer.

Reed, F. Grendon, 20 Elm st., Morristown

Reporter.

Curry, Marcus A., Greystone Park

Executive Committee.

The Officers and

Glazebrook, Francis H.

Plume, Clarence A.

Peck, Ellery N.

Abell, Elvira Dean, 190 South st., Morristown

Ackerman, Edward, Dover

Adsit, Noble H., Succasunna

Allaben, Anna L., 165 South st., Morristown

Baker, August L. L., Dover

Bartlett, Walt. M., Phys. Inst., Morristown

Beaver, Jennie Dean, 8 Oliphant Park, Morristown

Bird, Frank L., Netcong

Carberry, Edw. T., Wharton

Christian, Thomas B., Greystone Park

Collins, Lawrence M., Greystone Park

Cooper, Edward P., Parsippany

Costello, William Francis, Dover

Coultas, Aldo B., Madison

Curry, Marcus A., Greystone Park

De Groot, George S., Mendham

Donovan, Joseph, Greystone Park

Eckhardt, Ralph A., Madison

Emory, Gorge B., 1 Franklin pl., Morristown

MORRIS COUNTY.—Continued.

Farrow, J. Willard, Dover
 Flagge, Frederick W., Rockaway
 Foster, George H., Rockaway
 Frost, Inglis F., 26 Maple av., Morristown
 Glazebrook, Francis H., 6 Altmont Ct., Morrist'n
 Gibb, W. Blake, Madison
 Gilbertson, R. L., Madison
 Gordon, Charles D., Mt. Arlington
 Hahnn, P. S., Blackwell st., Dover
 Hampton, G. R., Greystone Park
 Haven, Samuel C., 14 Elm st., Morristown
 Horn, J. Fred'k, South st., Morristown
 Johnson, George L., 27 High st., Morristown
 Johnston, J. F., 209 Main st., Chatham
 Kice, Henry W., Wharton
 Knowles, Frederick E., Boonton
 Krauss, F. Irwin, Chatham
 Lane, Arthur K., Greystone Park
 Lathrope, Geo., H., 1019 Broad st., Newark
 Larson, Henry M., 36 Franklin st., Morristown
 Lewis, Alfred A., 12 DeHart, Morristown
 McDonald, Richard J., 80 Park av., Paterson
 McElroy, Ervin, Rockaway
 McMurthrie, William A., 26 Maple av., Morrist'n
 Mathews, Raymond H., 186 South st., Morristown
 McMahan, Bernard C., 183 South st., Morristown
 Mial, Leonidas L., 38 Elm st., Morristown
 Miller, Thomas B., Succasunna
 Mutchler, H. R., Dover
 Owen, Fred W., 18 Franklin pl., Morristown
 Peck, Ellery N., Boonton
 Plume, Clarence A., Succasunna
 Pollock, James L., Greystone Park
 Prager, Bert A., Chatham
 Reed, F. Grendon, 52 Hill st., Morristown
 Reed, R. Ralston, 65 Washington st., Morristown
 Rice, Franklin W., 184 South st., Morristown

Schmitz, Mathias, Denville
 Schulman, Robert, Mendham rd., Morristown
 Sherman, Byron G., Maple av., Morristown
 Smith, Malcolm K., 79 Maple av., Morristown
 Spencer, Alvin, 19 E. Blackwell st., Dover
 Summers, William J., Boonton
 Sutphen, E. Blair, 26 Maple av., Morristown
 Thomas, Thomas S., 135 South st., Morristown
 Voorhees, Wm. S., Mendham
 Washburn, Philip C., Greystone Park
 Wigg, Cuthbert, 434 Lathrop av., Boonton
 Willoughby, M. Kemper, Morris Plains
 Wolfe, W. J., Chatham
 Young, Geo. J., Memorial Hosp., Morristown

Associate Members.

Bishop, Louis F., New York
 Emerson, Linn, East Orange
 Prout, Thomas P., New York

Honorary Members.

Knight, August, Gladstone
 White, Granville, Gladstone

Received on Transfer.

Gibbs, W. Bake, from New York
 Lane, Arthur G., from New York
 Weizenhoffer, A., from New York

Resigned.

Pollard, Joseph E.

Number of members and basis of representation, 70.

100 per cent. paid up March 8, 1928.

*Deceased.

OCEAN COUNTY. (15)

Society organized October 28, 1903. Meets in May and November at the convenience of the members. Annual meeting in November.

President.

Bunnell, Frederick N., Barnegat

Vice-President.

Thompson, Theodore F., Lakewood

Treasurer.

Brouwer, Frank, Toms River

Secretary.

Towbin, Adolph, Lakewood

Reporter.

Lawrence, George W., Lakewood

Brouwer, Frank, Toms River
 Buermann, Robert, Lakewood
 Bunnell, Frederick N., Barnegat

Carrigan, Eugene S., Point Pleasant
 Denniston, Frank, Point Pleasant
 Disbrow, E. C., Toms River
 Disbrow, Vanderhoof M., Lakewood
 Goldstein, A., Lakewood
 Hance, Irwin Howell, Lakewood
 Herbener, Eugene G., Lakewood
 Jones, Ralph R., Toms River
 Lawrence, George W., Lakewood
 Lewis, Stewart, Lakehurst
 Lindley, C., 1236 Van Ness av., Los Angeles, Cal.
 Ripley, Charles D., Point Pleasant
 Towbin, Adolph, Lakewood

Honorary Members.

Davis, H. H., Toms River

Number of members and basis of representation, 16.

100 per cent. paid up March 8, 1928.

PASSAIC COUNTY. (16)

Society organized January 14, 1844. Meets the second Thursday of each month except June, July and August, at the Paterson Health Centre. Annual meeting in October.

President.

Tuers, George E., 18 Church st., Paterson

Vice-President.

Spickers, William, 6 Church st., Paterson

Second Vice-President.

Morrell, James P., 310 Broadway, Paterson

Secretary and Reporter.

Carlisle, John H., 129 Prospect st., Passaic

Treasurer.

Dingman, Norman M., 351 Van Houten st., Paterson

Censors.

Dingman, Thomas A., Paterson
 Hagen, Orville R., Paterson
 Mitchell, Chas. R., 311 Broadway, Paterson

Armstrong, Robt. R., 284 Bloomfield av., Passaic
 Ash, Frank W., 108 Carroll st., Paterson

PASSAIC COUNTY.—Continued.

- Atkinson, Jas. W., 27 Church st., Paterson
 Atwood, Edw. A., 203 Park av., Paterson
 Barr, Joseph, 84 Ward st., Paterson
 Becker, Leo V., 69 Ward st., Paterson
 Bender, Theo. T., 666 Broadway, Paterson
 Beshlian, Hagop K., 7 Lee pl., Paterson
 Bergin, Joseph V., 315 Broadway, Paterson
 Bohl, Louis J., 1051 Main st., Paterson
 Bonyng, Henry A., 107 Prospect st., Ridgewood
 Botbyl, Bert W., 927 Madison av., Paterson
 Boylan, Lawrence B., 630 Main st., Paterson
 Brancato, Peter, 17 Church st., Paterson
 Brevoort, Henry H., Main st., Lodi
 Briody, Henry E., 385 Main st., Paterson
 Briody, James F., 385 Main st., Paterson
 Butterfield, Arey A., 657 Main st., Passaic
 Carlisle, John H., 129 Prospect st., Passaic
 Carlough, David J., 426 Ellison st., Paterson
 Catanzaro, F., 151 Jefferson st., Passaic
 Caverly, Fred S., 21 Grove st., Passaic
 Chester, Saul, 264 Graham av., Paterson
 Ciccone, Anthony C., 389 Grand st., Paterson
 Clay, Thomas A., 351 Totowa av., Paterson
 Coen, Lawrence E., 24 Washington av., Clifton
 Cogan, Henry, 128 Carroll st., Paterson
 Cole, L. Frank, 240 Bloomfield av., Passaic
 Colfax, Wm. S., Bartholf av., Pompton Lakes
 Connoly, T. Vincent, 84 Ward st., Paterson
 Cotton, Norman T., 219 Graham av., Paterson
 Cremens, John F., 144 Carroll st., Paterson
 Crouse, David R., 84 Bloomfield av., Passaic
 Davenport, George S., 61 Passaic av., Passaic
 Demarest, Fred F. C., 657 Main av., Passaic
 Denton, Peter P., 951 Madison av., Paterson
 De Yoe, Leon E., 602 Broadway, Paterson
 Dingman, N. M., 351 Van Houten st., Paterson
 Dingman, Thos. A., 330 Broadway, Paterson
 Donohue, Frank B., Allegany, N. Y. State
 Drake, Daniel E., Newfoundland
 Drake, L. B., Newfoundland
 Duncan, Owsley B., 218 Broadway, Paterson
 Dunning, Walter L., 533 River st., Paterson
 Dwyer, Henry E., 261 Madison av., Passaic
 Dwyer, William A., 99 Park av., Paterson
 Ekins, Frank P., 221 Broadway, Paterson
 Feigenoff, Israel, 420 Broadway, Paterson
 Fliteroft, William, 510 River st., Paterson
 Flood, G. Balleray, 279 Broadway, Paterson
 Giambra, S. M., 23 Church st., Paterson
 Gillson, Hugh V., 21 Lee pl., Paterson
 Gillson, John T., 170 Broadway, Paterson
 Ginsberg, Samuel, 136 Bloomfield av., Passaic
 Glasgow, Thomas, 120 Passaic av., Passaic
 Gochman, Harry M., 166 Hamilton av., Paterson
 Golding, Harry N., 180 Carroll st., Paterson
 Gordon, Osher, 114 Prospect st., Passaic
 Graham, Arch'd F., 42 Park av., Paterson
 Greengrass, Jacob J., 179 Broadway, Paterson
 Hagen, Orville R., 170 Broadway, Paterson
 Harreys, Chas. W., 306 Broadway, Paterson
 Henion, Emanuel L., 16 Church st., Paterson
 Hirsh, Samuel, 118 Lexington av., Passaic
 Holmes, Thos. J. E., 119 Hamilton av., Paterson
 Hughes, J. Vernon, 665 Main av., Passaic
 Ives, Edward I., Stevens rd., Little Falls
 Jacob, William H., 99 N. Main st., Paterson
 Jarmulowsky, Harry, 29 Church st., Paterson
 Joseph, Morris, 271 Lexington av., Passaic
 Joyce, L. H., 259 Madison st., Passaic
 Kane, Charles J., 349 Grand st., Paterson
 Keating Charles A., 177 Ellison st., Paterson
 Keller, Franklin J., 795 Broadway, Paterson
 Kiefer, Raymond A., 18 Church st., Paterson
 *Kinne, Porter S., 575 E. 28th st., Paterson
 Kim, Gay Bong, 720 Main st., Paterson
 Kleiner, Samuel, 229 Broad st., Paterson
 Lee, Fred P., Department of Health, Paterson
 Levine, Israel, 215 Broadway, Paterson
 Levine, Sidney C., 253 Hamilton av., Paterson
 Levendusky, D. E., 52 2nd st., Passaic
 Levinsohn, S. A., 282 Broadway, Paterson
 Liefeld, Walter L., 657 Main av., Passaic
 Linares, A. C., 402 Market st., Paterson
 Lobsenz Nathan P., 294 Broadway, Paterson
 Lomauro, Jas. R., Passaic av. and Grand st., P's'c
 Low, Donald B., 529 Broadway, Paterson
 Lucas, Henry H., 170 Van Houten st., Paterson
 Lucent, S. Bell, Little Falls
 Luck, Paul, 74 Lexington av., Passaic
 MacAlister, Wm. W., 333 Van Houten st., Paterson
 MacGregor, Allen W., 379 Ellison st., Paterson
 *Machlin, Abraham, 211 Lexington av., Passaic
 Mackintosh, M. Alex., 237 Broadway, Paterson
 Maclay, Joseph A., 239 Boadway, Paterson
 MacMillan, Wright, 657 Main av., Passaic
 McBride, Andrew F., 30 Church st., Paterson
 McCamey, Kenneth E., 174 Carroll st., Paterson
 McCoy, John C., 292 Broadway, Paterson
 McDede, Frank F., 922 Main st., Paterson
 McGuffie, R. N., 125 Prospect st., Passaic
 Magennis, Bryan C., 170 Hamilton av., Paterson
 Manly, Thomas E., 313 Park av., Paterson
 Maps, Howard L., 53 Passaic av., Passaic
 Markowitz, Louis, 189 Graham av., Paterson
 Marsh, Elias J., 400 Van Houten st., Paterson
 Matthews, L. M., 655 Main av., Passaic
 Mazzarella, Carlo, 56 Cross st., Paterson
 Meier, William, Haskell
 Meloney, Lester F., 156 2nd st., Clifton
 Mendelsohn, David H., 146 Broadway, Paterson
 Meneve, Alfred D., 87 Bridge st., Paterson
 Michela, Luigi S., 206 Carroll st., Paterson
 Mills, Alvah V., Lindsley rd., Little Falls
 Mitchell, Charles R., 311 Broadway, Paterson
 Morrill, James P., 310 Broadway, Paterson
 Murn, Charles J., 48 Smith st., Paterson
 Neer, Frank Y., 127 Broadway, Paterson
 Neer, William, 245 Broadway, Paterson
 Norval, William A., 419 Main st., Paterson
 Nye, Howard H., 174 Broadway, Paterson
 O'Grady, Thomas F., 374 Grand st., Paterson
 Okin, L., 23 Passaic av., Passaic
 Oram, Joseph H., 495 Broadway, Paterson
 Pal, Darbari R., 32 Clark st., Paterson
 Parke, Henry, 9 Church st., Paterson
 Pelusio, August N., 125 E. 16th st., Paterson
 Phelps, James, 238 Park av., Paterson
 Piller, Jacob, 473 Union av., Paterson
 Polizzotti, J. L., 193 Park av., Paterson
 Powellson, A. P., (no address)
 Rauschenbach, Paul E., 223 Broadway, Paterson
 Reynolds, Earl C., 657 Main av., Passaic
 Reynolds, Harry C., 657 Main av., Passaic
 Ritter, John J., Butler
 Roemer, Jacob, 213 Broadway, Paterson
 Roy, Jos. N., 271 Graham av., Paterson
 Russell, Charles B., 119 Hamilton av., Paterson
 Ryan, John N., 158 Lexington av., Passaic
 Salzman, Nathan, 306 Broadway, Paterson
 Schultz, A. M., 379 Union av., Paterson
 Schwartz, William, 155 Lexington av., Passaic
 Scribner, Charles H., 84 Ward st., Paterson
 Shapiro, David, 104 Passaic av., Passaic
 Shapiro, Louis G., 375 Broadway, Paterson
 Shepard, R. M., 170 Broadway, Paterson
 Shipee, David N., Midvale
 Shulman, Abraham, 379 Main st., Paterson
 Simons, Morris L., 174 Washington pl., Passaic
 Siveke, John, 106 Lexington av., Passaic
 Slaff, F., 16 Grove st., Passaic

PASSAIC COUNTY.—Continued

Sloan, Samuel L., 152 Belmont av., Paterson
 Spickers, William, 6 Church st., Paterson
 Stein, Harry M., 227 W. Broadway, Paterson
 *Stewart, James M., 294 Broadway, Paterson
 Stinson, Richard, 641 E. 18th st., Paterson
 Sucoff, Moses C., 236 Monroe st., Passaic
 Surnamer, Isaac, 345 Broadway, Paterson
 Taber, L. R., 170 Broadway, Paterson
 Temple, Arthur H., 164 Jefferson st., Passaic
 Terhune, Percy H., 171 Paulison av., Passaic
 Todd, Francis H., 83 Auburn st., Paterson
 Thorne, Wm. P., Main st., Butler
 Tuers, George E., 18 Church st., Paterson
 Tweddel George K., 12 Church st., Paterson
 Udinsky, Hyman J., 29 Passaic av., Passaic
 Vanderbeek, Andrew B., 174 Broadway, Paterson
 Van Erde, Alfred H., Lafayette av., Hawthorne
 Van Orden, Thomas D., Ramapo av., Pompton
 Van Ripper, A. Ward, 605 Main av., Passaic
 Van Schott, Gerald, Temple pl., Passaic
 Van Urk, Frederick T., 149 Lexington av., Passaic
 Van Winkle, John S., 297 Boadway, Paterson
 Veenstra, William, 90 Auburn st., Paterson
 *Vigna, Fortunato, 30 Ward st., Paterson
 Vosburg, Fred, 136 Prospect st., Passaic

Vreeland, Ralph J., 44 Church st., Paterson
 Walker, Harold G., Everett av., Wyckoff
 Walton, Gordon G., 17 Church st., Paterson
 Ward, Albert H., 404 Totowa av., Paterson
 Warren, D. E., 265 Gregory av., Passaic
 Was, Francois T. J., 75 E. 16th st., Paterson
 Wassing, Hans, 282 Broadway, Paterson
 Wilkinson, Boyd E., 18 Church st., Paterson
 Willard, Harry S., 44 Church st., Paterson
 Williams, Hiram, 230 Lexington av., Passaic
 Winters, Walter M., 288 Broadway, Paterson
 Wishnack, Meyer, 318 Broadway, Paterson
 Yates, John S., 414 Ellison st., Paterson
 Young, Warren H., 41 Lincoln av., Little Falls

Received on Transfer.

Okin, I., from Orange County Medical Society, N. Y.
 Shepard, R. M., from Oklahoma State Society

Number of members and basis of representation, 186.

100 per cent. of membership in good standing March 8, 1928.

*Deceased.

SALEM COUNTY. (17)

Society organized May 4, 1880. Meets second Wednesday in October, December, February and April. Social meeting in May. Annual meeting in October.

President.

Davis, R. M. A., Salem

Vice-President.

James, William H., Pennsville

Secretary and Treasurer.

Green, D. W., Salem

Reporter.

James, William H., Pennsville

Censors.

Fleming, C. L., Pennsgrove
 James, W. H., Pennsville
 Summerill, John M., Pennsgrove

Church, F. H., Salem
 Davis, Richard M. A., Salem
 DeGrofft, Eugene E., Woodstown

Ewen, Warren L., Salem
 Fleming, Charles Leroy, Pennsgrove
 Green, David W., Salem
 Hilliard, William T., Salem
 Hires, Nathaniel S., Salcm
 Hummel, L. H., Salem
 James, William H., Pennsville
 Jarratt, R. B., Pennsgrove
 Miller, Louis H., Woodstown
 Perry, Frank L., Pennsgrove
 Sherron, Clifford M., Salem
 Summerill, John M., Pennsgrove

Moved from the County.

Davies, Elmer

Number of members and basis of representation, 15.

100 per cent. paid up March 8, 1928.

*Deceased.

SOMERSET COUNTY. (18)

Society organized in May, 1816. Meets second Thursday in October, December, February, April, June and August. Annual meeting in October.

President.

Stillwell, Aaron L., Somerville

Vice-President.

Kay, Clarence R., Peapack

Secretary.

Field, Frank L., Far Hills

Treasurer.

Hegeman, Runkle F., Somerville

Reporter.

Ely, Lancelot, Somerville

Censors.

Wild, F. A., Bound Brook

Meigh, Josiah, Bernardsville
 Ten Eyck, John D., Franklin Park
 Renner, Ban S., Skillman

Anderson, John E., Neshanic
 Beekman, John B., Bedminster
 Borow, Benjamin, Bound Brook
 Boulden, Geo. P., Belle Mead
 Brittain, Elmer G., Bound Brook
 Cooper, J. Howard, East Millstone
 Crane, N. T., Bound Brook
 Ely, Lancelot, Somerville
 Field, Frank L., Far Hills
 *Fisher, Claudius R. P., Bound Brook
 Flint, Edgar, Raritan
 Flynn, Thomas H., Somerville
 Francis, Adaline M., Somerville
 Graff, Effie R., Somerville

SOMERSET COUNTY.—Continued.

Halsted, Charles F., Somerville
 Hegeman, Runkle F., Somerville
 Hird, Emerson F., Bound Brook
 Kay, Clarence R., Peapack
 Knight, Augustus S., Gladstone
 Lawton, A. Anderson, Somerville
 Levy, A., Somerville
 Long, William H., Somerville
 Lovejoy, J., Bound Brook
 Mack, George L., Bound Brook
 McConaughy, Francis, Somerville
 Meigh, Josiah, Bernardsville
 Renner, Dan Smith, Skillman
 Robinson, John T., Bound Brook

Smalley, Mahlon C., Peapack
 Stillwell, Aaron L., Somerville
 Ten Eyck, John D., Franklin Park
 Weeks, David F., Skillman
 Wild, Frederick A., Bound Brook
 Zeglio, Peter J., North Plainfield

Associate Member.

Voorhees, E. R., M. D. C., Somerville

Number of members and basis of representation, 33.

100 per cent. paid up March 8, 1928.

SUSSEX COUNTY. (19)

Society organized August 22, 1829. Meets third Tuesday in October. Other meetings at convenience of members. Annual meeting in October.

President.

Morrison, Frederick H., Newton

Vice-President.

Voorhees, Lamar, Newton

Treasurer.

Pooley, Thomas R., Jr., Newton

Secretary.

Wilbur, Frederick P., Franklin

Reporter.

Van Gaasbeek, Harvey D., Sussex

Censors.

Voorhees, Lamar, Newton
 Coleman, Joseph G., Hamburg
 Harp, H. T., Sussex

Beatty, Enos E. B., Newton
 Cole, Blace, Newton
 Coleman, Joseph G., Hamburg
 Jacob, Albert N., Sparta
 Landis, Edwin W., Stillwater
 Morrison, Frederick H., Newton
 Pellett, J., Hamburg
 Pooley, Thomas R., Jr., Newton
 Roy, Bert W., Sussex
 Smith, Warren H., Newton
 Uptegrove, Edward P., Vernon
 Van Gaasbeek, Harvey D., Sussex
 Voorhees, Lamar, Newton
 White, R., Franklin
 Wilbur, Frederick P., Franklin

Honorary Member.

Miller, John N., Newton

Number of members and basis of representation, 15.

UNION COUNTY. (20)

Society organized June 7, 1869. Meets second Wednesday of January, April, July and October. Annual meeting in October.

President.

Sell, Frederick W., Irving st., Rahway

Vice-President.

Van Horn, Alfred, Plainfield

Secretary.

Horre, George W. H., 960 E. Jersey, Elizabeth

Treasurer.

Hoover, Alden R., 5 Prince st., Elizabeth

Reporter.

Shirrefs, Russel A., 1158 E. Jersey st., Elizabeth

Censors.

Schlichter, Charles H., Elizabeth
 Hedges, Elis W., Plainfield
 Hedges, Benj. VanD., 720 Watch'g av., Plainfield
 Wilson, Norton L., 410 Westminster av., Elizabeth

Abel, Henri E., 345 Morris av., Elizabeth
 Ard, Frank C., 604 Park av., Plainfield
 Baker, Raymond D., 52 DeFor. av., Summit
 Banker, Geo. T., 1060 E. Jersey st., Elizabeth
 Barr, A. H., 830 Wood av., Linden
 Beisler, Law G., 1528 N. Broad st., Hillside
 Bensley, Maynard G., 129 Summit av., Summit

Bishop, Carl, 604 Park av., Plainfield
 Blair, T. D., 414 Park av., Plainfield
 Bloch, Harry, 200 E. Jersey st., Elizabeth
 Blumberg, Jack, 1028 E. Jersey st., Elizabeth
 Blythe, Roland P., 115 Walnut st., Cranford
 Bowles, Harry H., Overlook Hospital, Summit
 Boozan, Wm. E., 1020 E. Jersey st., Elizabeth
 Brock, Howard F., 417 W. Broad st., Westfield
 Brokaw, Chris. A., 628 Newark av., Elizabeth
 Brown, L. Greeley, 173 Madison av., Elizabeth
 Buck, Abrian O., 405 Westminster av., Elizabeth
 Bunting, P. DuBois, 712 N. Broad st., Elizabeth
 Burritt, Norman W., 364 Springfield av., Summit
 Burnett, Thomas F., 121 Court st., Elizabeth
 Byington, R., Summit
 Campus, Ellis, 612 W. Front st., Plainfield
 Carmen, John H., 602 Crescent av., Plainfield
 Carstaphen, W. T., 619 Park av., Plainfield
 Cassili, A., Eliz. Gen. Hosp., Elizabeth
 Chaiken, Louis, 1024 E. Jersey st., Elizabeth
 Chapman, O. P., 3 Prince st., Elizabeth
 Childers, Robert J., 604 Park av., Plainfield
 Clawson, Marcus L., 420 Park av., Plainfield
 Corbusier, Harold D., 612 Park av., Plainfield
 Cregar, Peter B., 420 Grant av., Plainfield
 Currie, Norman W., 508 Central av., Plainfield
 Davis, Stanton H., 420 Park av., Plainfield
 De Cesare, F. D., 17 W. Clay st., Roselle Park
 Decker, Charles T., 215 Prospect av., Westfield
 Dengler, Henry P., Springfield

UNION COUNTY.—Continued.

- Dennin, Joseph W., 308 Chestnut st., Roselle
 Disbrow, G. Ward, 126 Mntn. av., Summit
 Drury, Alfred J., 3 Westville av., Roselle Park
 Durrah, Fred F., 310 Plainfield av., Plainfield
 duBuse, L. C. Victor, 476 Jef's'n av., Elizabeth
 Farrell, J. A., Int. Health Div., R'kerf'r F., N. Y.
 Fitch, Thomas, 916 Park av., Plainfield
 Foster, Frank L., 320 Springfield av., W. Cranford
 Frohwein, Ida H., 119 Morristown rd., Elizabeth
 Funk, Joseph, 615 Elizabeth av., Elizabeth
 Galloway, George E., 109 Milton av., Rahway
 Gerendasy, Julius, 956 E. Jersey st., Elizabeth
 Gibbs, Alice S., 345 Union av., Elizabeth
 Giglio, A. S. V., 230 Christine st., Elizabeth
 Gilpin, Friend B., 118 North av., Cranford
 Glass, Benjamin E., 609 Waterbury av., Plainfield
 Glasston, H. M., 528 N. Wood av., Linden
 Goodrich, Stewart L., 19 Vreeland av., Jer. City
 Green, James S., 463 N. Broad st., Elizabeth
 Griesmier, Zadoc L., 126 3rd av., Roselle
 Guidi, Guido M., 212 Christine st., Elizabeth
 Hallock, W. J., Berkley Heights, Summit
 Hanrahan, Jas. M., 1144 E. Broad st., Elizabeth
 Harrison, Joseph B., 302 E. Broad st., Westfield
 Haseltine, Sherwin L., 410 Westminster, Elizabeth
 Hedges, Benj. VanD., 720 Watchung av., Plainfield
 Hedges, Ellis W., 720 Watchung av., Plainfield
 Henn, Louis D., Watchung av., Plainfield
 Higgins, Thomas F., 146 Reid st., Elizabeth
 Hoagland, Bonn W., 509 Barron av., Woodbridge
 Holmes, Grace A., 1077 E. Jersey st., Elizabeth
 Holtzman, M., 167 Second av., Elizabeth
 Hoover, A. R., 5 Prince st., Elizabeth
 Horre, Geo. W. H., 960 E. Jersey st., Elizabeth
 Hubbard, Harry V., 420 Central av., Plainfield
 Hughes, Frederick J., 706 Paik av., Plainfield
 Imbleau, J. E. L., Morris av., Union
 Johnson, Harold F., 915 Kensington, Plainfield
 Keeney, Caldwell B., 137 Summit av., Summit
 Kinch, Fred A., 267 E. Broad st., Westfield
 Knauer, George, 930 Elizabeth av., Elizabeth
 Korngut, Samuel, 306 First av., Elizabeth
 Krans, Clara DeH., 920 Park av., Plainfield
 Krans, Edw. S., 920 Park av., Plainfield
 Laird, George S., 127 Central av., Westfield
 Lamson, Wm. J., 120 Summit av., Summit
 Lamy, Anthony W., 560 Newark av., Rahway
 Lance, E. W., 78 W. Milton av., Rahway
 Larrabee, C. H., 30 Beechwood rd., Summit
 Lathrop, Frederick W., 507 Park av., Plainfield
 Lawrence, Wm., Jr., 129 Summit av., Summit
 Leggett, Lindley H., Jr., 330 E. Broad st., Westf'd
 Leggett, Thos. H., Jr., 706 Park av., Plainfield
 Lerman, Irving, 1024 E. Jersey st., Elizabeth
 Lippard, Alvin T., 209 Hollywood av., Hillside
 Lippincott, L. Y., 156 E. 7th st., Plainfield
 Livengood, Horace R., 1105 E. Jer. st., Elizabeth
 Lobo, J. P., 72 E. Jersey st., Elizabeth
 Lufburrow, Chas. B., 441 W. Front st., Plainfield
 Malatesta, Chas. S., 720 Watchung av., Plainfield
 Marone, Carmine R., 648 First av., Elizabeth
 McCallion, W. H., 33 Prince st., Elizabeth
 McElhinney, Dennis R., 110 W. Jer. st., Elizabeth
 McIver, Woody, 405 Westminster av., Elizabeth
 Mentzer, C. A., 1444 N. Broad st., Hillside
 Moister, Roger W., 7 Norwood av., Summit
 Montfort, Robt. J., 1051 E. Jersey st., Elizabeth
 Morris, Thos. M., 124 Watchung av., Plainfield
 Morris, Watson B., Springfield
 Mravlag, Victor, 1064 E. Jersey st., Elizabeth
 Munger, Ray T., 609 Watchung av., Plainfield
 Myers, Eugene W.
 Newman, Louis G., 316 E. Broad st., Westfield
 Nittoli, Rocco M., 660 E. Jersey st., Elizabeth
 Oakes, Alfred E., 1158 Mary st., Elizabeth
 Orton, George Lee, 98 Elm st., Rahway
 Paulson, Arch. M., 160 E. 7th st., Plainfield
 Phelan, Walter F., 61 Cherry st., Elizabeth
 Pierson, Henry C., 530 Locust st., Roselle
 Pratt, C. Howard, 411 E. 5th st., Plainfield
 Prout, Thos. P., 19 Prospect st., Summit
 Quinn, Stephen T., 326 S. Broad st., Elizabeth
 Ramsay, Murray E., 221 Lenox av., Westfield
 Randolph, John M., 131 Main st., Rahway
 Rayne, J. Edw., 116 Cherry st., Elizabeth
 Reiner, Jacob, 517 No. Broad st., Elizabeth
 Robertson, Grace M., 820 2nd pl., Plainfield
 Robinson, Moe, 1014 E. Grand st., Elizabeth
 Runnels, John E., B. B. Sanitorium, Scotch Plains
 Salvati, Leo H., 130 Elm st., Westfield
 Savoye, Rich. G., 115 Central av., Westfield
 Schlichter, Chas. H., 556 N. Broad st., Elizabeth
 Sell, Frederick W., 166 Irving st., Rahway
 Seymour, Geo. A., 121 Jefferson av., Elizabeth
 Shangle, Milt A., 34 Prince st., Elizabeth
 Shirrefs, Rus A., 55 Broad st., Elizabeth
 *Sinclair, Robert R., 180 Elm st., Westfield
 Sisserson, W. W., 425 Summit av., Westfield
 Smith, Wm. R., 42 Westfield av., Roselle Park
 Spencer, Geo. T., 1101 E. Jersey st., Elizabeth
 Stanton, Nath. B., Grant av., Plainfield
 Stein, Emil, 607 Park av., Elizabeth
 Stein, Martin H., 163 Second st., Elizabeth
 Stern, Arthur, 224 E. Jersey st., Elizabeth
 Strickland, Geo. W., 123 First av., Roselle
 Strom, A., 410 N. 7th st., Plainfield
 Tidaback, John D., 52 Beauvoir av., Summit
 Thompson, R. J., 157 E. Grant av., Roselle Park
 Turner, Wm. F., 519 Magie st., Elizabeth
 Upham, Chas. E. H., 399 Westfield av., Westfield
 Vail, Jas. Lindley, 24 Holly st., Cranford
 Van Horn, Alfred F., 514 Central av., Plainfield
 Vinciguerra, Michael, 1071 Eliza. av., Elizabeth
 Vogel, H. Austin, Eliza. Gen. Hospital, Elizabeth
 Wade, Simeon F., 555 Newark av., Elizabeth
 Wagner, Otto, 1051 Elizabeth av., Elizabeth
 Walsh, Ronald J., 323 Chestnut st., Roselle
 Walsh, Thos. J., 240 S. Broad st., Elizabeth
 Ward, Leo J., 1053 Elizabeth av., Elizabeth
 Warncke, Frank H., 525 Westfield av., Elizabeth
 Weigel, Elmer P., 503 Park av., Plainfield
 Williams, Frank A., 260 W. Jersey st., Elizabeth
 Wilson, Norton L., 410 W'tm'ster av., Elizabeth
 Yood, Rapheal, 410 Grant st., Plainfield
 Yuckman, William, Elizabeth

Resigned

Falvello, Nicholas A.

Received on Transfer from other Counties
or States

Lippincott, Lawrence, from Middlesex Co.
 Aczel, Stephen, from West Virginia
 Dr. Aczel has changed his name to Dr. Stephen
 Steele.

Number of members and basis of representa-
 tion, 160.

*Deceased.

WARREN COUNTY. (21)

Society organized February 15, 1826. Meets second Tuesday of January, April, July and October. Annual meeting in October.

President.

Bloom, George H., Phillipsburg

Vice-President.

Hackett, Leon, Washington

Secretary.

Osmun, L. C., Hackettstown

Treasurer.

Cummins, G. Wyckoff, Belvidere

Reporter.

Shimer, F. A., Phillipsburg

Censors.

Allen, William C., Blairstown

Bossard, H. P., Phillipsburg

Zuck, A. C., Washington

Albertson, William C., Belvidere

Allen, William C., Blairstown

Barber, Isaac, Phillipsburg

Bloom, Lawrence H., Phillipsburg

Bloom, George Homer, Phillipsburg

Bossard, Henry B., Phillipsburg

Brasefield, Edgar N., Phillipsburg

Cline, C. H., Hackettstown

Cummins, G. Wyckoff, Belvidere

Curtis, Frank W., Stewartsville

Drake, Paul F., Phillipsburg

Hackett, Leon, Washington

Hoagland, Lewis B., Oxford

La Riew, Fred J., Washington

Lefferts, Franklin P., Belvidere

Lyon, Charles H., Phillipsburg

McKinstry, Frank P., Washington

Osmun, Louis C., Hackettstown

Pursell, William Dana, Phillipsburg

Stone, Russell B., Phillipsburg

Shimer, Floyd A., Phillipsburg

Smith, Charles B., Washington

Tunison, Godfrey O., Oxford

Vail, William Penn, Blairstown

Wolf, Frank A., Phillipsburg

Woodruff, R. H., Hackettstown

Zuck, Arthur C., Washington

Number of members and basis of representation, 27.

100 per cent. paid up March 8, 1928.

*Deceased.

SUMMARY.

Total Membership.

Counties reporting as many members as were enrolled last year are carried in the 100 per cent. paid up column.

New members, who have paid their dues, reported to the Recording Secretary up to March 8th, 1928.

ATLANTIC	125
BERGEN	116
BURLINGTON	48
CAPE MAY	20
CAMDEN	114
CUMBERLAND	49
ESSEX	593
GLOUCESTER	35
HUDSON	371
HUNTERDON	21
MERCER	134
MIDDLESEX	105
MONMOUTH	72
MORRIS	70
OCEAN	16
PASSAIC	186
SALEM	15
SOMERSET	33
SUSSEX	15
UNION	160
WARREN	27
	<hr/>
	2325

ATLANTIC	
BERGEN	
BURLINGTON	
CAPE MAY	
CAMDEN	
CUMBERLAND	
ESSEX	
GLOUCESTER	
HUDSON	
MERCER	
MIDDLESEX	
MONMOUTH	
MORRIS	
OCEAN	
PASSAIC	
SALEM	
SOMERSET	
WARREN	

ATLANTIC	7
BERGEN	14
BURLINGTON	1
CAPE MAY	3
CAMDEN	4
CUMBERLAND	2
ESSEX	63
GLOUCESTER	4
HUDSON	10
HUNTERDON	0
MERCER	11
MIDDLESEX	3
MONMOUTH	1
MORRIS	8
OCEAN	2
PASSAIC	8
SALEM	1
SOMERSET	0
SUSSEX	1
UNION	7
WARREN	1
	<hr/>
	151

Number of deaths reported during the year, 23.

Comparison with Year 1927:

Membership in 1927 report	2248	New members in 1927 report	133
Membership in 1928 report	2325	New members in 1928 report	151

J. BENNETT MORRISON,
Recording Secretary.

An Alphabetical List of the Members of the Medical Society of New Jersey

Compiled March, 1928

The figures in parenthesis refer to County Societies as follows: (1) Atlantic, (2) Bergen, (3) Burlington, (4) Camden, (5) Cape May, (6) Cumberland, (7) Essex, (8) Gloucester, (9) Hudson, (10) Hunterdon, (11) Mercer, (12) Middlesex, (13) Monmouth, (14) Morris, (15) Ocean, (16) Passaic, (17) Salem, (18) Somerset, (19) Sussex, (20) Union, (21) Warren.

* Deceased.

- Abel, Henri E., 345 Morris av., Elizabeth (20)
 Abell, Elvira Dean, Morristown (14)
 Abraham, C. F., 85 So. Arlington av., E. O. (7)
 Abrams, A. B., 668 Clinton av., Newark (7)
 Ackerman, Edward, Dover (14)
 Ackerman, James F., 1010 Grand av., Asb. P'k (13)
 Ackerman, Joseph H., 404 Asbury av., Asb. P'k (13)
 Ackley, D. B., 21 No. Clinton av., Trenton (11)
 Adams, Charles F., 34 W. State st., Trenton (11)
 Adams, John K., 3 Prospect st., East Orange (7)
 Adams, Samuel, 29 Highland av., Jersey City (9)
 Adler, Joseph, 933 Ave. C, Bayonne (9)
 Adsit, Noble H., Succasunna (14)
 Ainsley, H. Bryson, 1959 Hudson Blvd., Jer. City (9)
 Albano, Joseph, 535 No. 7th st., Newark (7)
 Albee, Geo. C., 219 S. O. av., South Orange (7)
 Albertson, William C., Belvidere (21)
 Alexander, Hugo, 1029 Garden st., Hoboken (9)
 Alexander, Samuel, Park Ridge (2)
 Alexander, W. G., 48 Webster pl., Orange (7)
 Allaben, Anna, 165 South st., Morristown (14)
 Allen, G. Herbert, 181 Roseville av., Newark (7)
 Allen, I. L., 521 Palisade av., West Hoboken (9)
 Allen, William C., Blairstown (21)
 Alling, Frederick A., 12 Central av., Newark (7)
 Allman, David B., 104 St. Charles pl., Atl. City (1)
 Alpert, Edward, 661 Jersey av., Jersey City (9)
 Altschul, Frank J., 126 Garfield av., L. Branch (13)
 Ambrose, A., 71 Congress st., Newark (7)
 Anderson, John E., Neshanic (18)
 Anderson, J. F., 195 College av., N. Brunswick (12)
 Anderson, Richard D., Burlington (3)
 Anderson, Wm. Edgar, Englishtown (13)
 Andrea, Paul, 52 Warner av., Jersey City (9)
 Andrews, Clarence L., 101 S. Ind. av., Atl. City (1)
 Angelillo, M. C., 333 Clifton av., Newark (7)
 Apgar, Francis Albany, Oldwick (10)
 Applegate, Asher T., Englishtown (13)
 Applegate, E. T. R., 1125 Greenwood, Trenton (11)
 Applegate, G. T., Schureman st., N. Brunswick (12)
 Ard, Frank C., 604 Park av., Plainfield (20)
 Areson, Wm. H., 153 Belvu. av., U. Montclair (7)
 Arlitz, Wm. J., 107 Newark st., Hoboken (9)
 Armstrong, R. R., 284 Bloomfield av., Passaic (16)
 Armstrong, Samuel E., Rutherford (2)
 Arthur, Francis M., Hamilton Square (11)
 Ash, Arthur F., 710 Blvd., East, Weehawken (9)
 Ash, Frank W., 108 Carroll st., Paterson (16)
 Asher, Maurice, 186 Clinton av., Newark (7)
 Ashcraft, Samuel F., Mullica Hill (8)
 Aszody, Paul, 9 Pierce st., Newark (7)
 Atkinson, A. W., 423 E. State st., Trenton (11)
 Atkinson, Jas. W., 27 Church st., Paterson (16)
 Atwood, Edw. A., 203 Park av., Paterson (16)
 Audi, Angelo, 221 Central av., Union City (9)
 Auremma, Michael, 419 Adams st., Hoboken (9)
 Axford, W. Homer, 840 Boulevard, Bayonne (9)
 Axilrod, M. H., 2620 Pacific av., Atlantic City (1)
 Bachmann, Wm., 87 Hillcrest ter., East Orange (7)
 Bacon, Mary, Bridgeton (6)
 Bagg, Linus W., 87 Lincoln Park, Newark (7)
 Bailey, Wilson G., 512 Broadway, Camden (4)
 Baird, David, Jr., Florence (3)
 Baird, Thompson M., 782 Kearny av., Arlington (7)
 Baker, August L. L., Dover (14)
 Baker, Charles F., 198 Clinton av., Newark (7)
 Baker, Hugh H., Vineland (6)
 Baker, Maclyn, 681 Stuyvesant av., Irvington (7)
 Baker, Maurice E., 1149 Kaighn av., Camden (4)
 Baker, Raymond D., 52 De Forest av., Summit (20)
 Baldwin, Samuel H., 626 Clinton av., Newark (7)
 Balson, Zach. D. B., 241 16th av., Newark (7)
 Banach, Leon, 2747 Boulevard, Jersey City (9)
 Banks, Winifred D., 6 N. Munn av., E. Orange (7)
 Banker, Geo. T., 1060 E. Jersey st., Elizabeth (20)
 Barb, K. B., Kaighn & Princess avs., Camden (4)
 Barbarito, Wm. N., 2671 Boulevard, Jersey City (9)
 Barbash, Samuel, 1920 Pacific av., Atlantic City (1)
 Barber, Isaac, Phillipsburg (21)
 Bardsley, C. A., Park av., Laurel Springs (4)
 Bariscillo, John J., 928 Bangs av., Asbury Park (13)
 Barkhorn, Henry C., 45 Johnson av., Newark (7)
 Barnes, William J., Englewood (2)
 Barr, A. H., 830 Wood av., Linden (20)
 Barr, Joseph, 84 Ward st., Paterson (16)
 Barrett, Arthur F., 835 Fairmount av., J. City (9)
 Barrett, Wesley J., 517 Cooper st., Camden (4)
 Bartlett, Clara K., 4301 Atl. av., Atlantic City (1)
 Bartlett, Walter M., Phys. Inst., Morristown (14)
 Barrows, A. M., 440 Hamilton av., Trenton (11)
 Basset, Lavern C., 320 Newmarket rd., Dunellen (12)
 Baset, N. L., 117 S. Illinois av., Atlantic City (1)
 Bassin, John N., 25 Van Ness pl., Newark (7)
 Bateman, Sydney, 10 S. Morris av., Atlantic City (1)
 Bates, Chas. A., 919 S. Main st., Pleasantville (1)
 Bauer, Harry W., Palmyra (3)
 Baum, Felix, 138 Clinton av., Newark (7)
 Beach, Edward M., West Long Branch (13)
 Beachler, Jules, 439 16th av., West New York (9)
 Beatty, Enos E. B., Newton (19)
 Beatty, Henry M., 50 Centre st., Trenton (11)
 Bearsto, E. B., 495 Pennington av., Trenton (11)
 Beaver, Jennie Dean, 8 Oliphant Pk., Morrist'n (14)
 Becker, C. Fred, 620 Benson st., Camden (4)
 Becker, Fred W., 14 Clinton pl., Newark (7)
 Becker, Leo V., 69 Ward st., Paterson (16)
 Becket, Geo. C., 350 Springdale av., E. Orange (7)
 Beckwith, J. T., 33 S. Indiana av., Atlantic City (1)
 Beekman, Jesse H., Sayreville (12)
 Beekman, John B., Bedminster (18)
 Beggs, Wm. P., 2 Lombardy st., Newark (7)
 Behrens, Herman, 312 Webster av., Jersey City (9)
 Beir, I. R., Haverford Apts., Atlantic City (1)
 Beisler, Lawrence G., 1528 N. Broad st., Hillside (20)
 Beling, Chris. C., 109 Clinton av., Newark (7)
 Bell, J. Finley, Englewood (2)

- Bell, Thomas, 340 Belmont av., Newark (7)
 Bellis, Horace D., 437 E. State st., Trenton (11)
 Belting, Arthur W., Adela Apts., Trenton (11)
 Ben-Asher, Solomon, 277 Bergen av., Jer. City (9)
 Benedict, A. C., 121 Irvington av., So. Orange (7)
 Bender, Theo. T., 666 Broadway, Paterson (16)
 Benjamin, H. C., 59 Crescent av., Jersey City (9)
 Bennett, Charles D., 300 Broadway, Newark (7)
 Bennett, F. W., 117 S. Illinois av., Atlantic City (1)
 Bennett, R. S., 516 Asbury av., Asbury Park (13)
 Bennett, Samuel D., Millville (6)
 Bennett, W. F., Essex Co. Sanitorium, Verona (7)
 Bensley, Maynard G., Summit av., Summit (20)
 Bentley, D. F., Jr., 403 Cooper st., Camden (4)
 Berg, S., 530 Central av., Newark (7)
 Bergen, Elston H., 25 Mercer st., Princeton (11)
 Berger, Harry, 921 Clinton av., Trenton (11)
 Bergin, Joseph V., 315 Broadway, Paterson (16)
 Berkow, Samuel G., Perth Amboy (12)
 Berlin, Joseph I., 9 Gifford av., Jersey City (9)
 Berlinger, Kurt J., Vineland (6)
 Berman, Jacob J., 409 Market st., Trenton (11)
 Berner, David, 2817 Pacific av., Atlantic City (1)
 Bernstein, Julius, 345 Camden st., Newark (7)
 Beshlian, Hagop K., Lee pl., Paterson (16)
 Beveridge, W. W., 1000 Gerard av., Asbury Pk. (13)
 *Bew, Richard, 1217 Pacific av., Atlantic City (1)
 Bewley, L. H., 1209 Pacific av., Atlantic City (1)
 Beyer, Othmsr J., 42 Laurel av., Irvington (7)
 Bianchi, Angelo R., 104 7th av., Newark (7)
 Bien, Frank A., 999 Clinton av., Newark (7)
 Bierman, Irvin M., 18 Stratford pl., Newark (7)
 Binder, Joseph, 422 Bergen av., Jersey City (9)
 Bingham, A. W., 123 Harrison st., East Orange (7)
 Bird, Frank L., Netcong (14)
 Birdsall, Clarence A., 3 Small av., Caldwell (7)
 Bishop, Carl, 604 Park av., Plainfield (20)
 Bissett, John V., 15 Lombardy st., Newark (7)
 Blair, T. D., 414 Park av., Plainfield (20)
 Blaisdell, C. Byron, 48 Norwood av., L. Branch (13)
 Black, Alan B., Mickleton (8)
 Black, LeRoy, Rutherford (2)
 Blackbourne, G., 19 Fulton st., Newark (7)
 Blackwell, Enoch, Trenton Trust Bldg., Trenton (11)
 Blakeley, Abram P., 475 Jersey av., Jersey City (5)
 Blakely, Edward W., 232 Ivy Court, Orange (7)
 Blanchard, O. R., 37 Clinton av., Jersey City (9)
 *Blank, Louis N., 74 So. 8th st., Newark (7)
 Blaugrund, Samuel, 553 So. Broad st., Trenton (11)
 Bleasby, LeRoy, Garfield (2)
 Bleick, Theodore E., 61 Van Ness pl., Newark (7)
 Bleick, Wm. D., 22 Osborne ter., Newark (7)
 Bleier, Louis, 31 Lincoln Park, Newark (7)
 Bloch, Harry, 200 E. Jersey st., Elizabeth (20)
 Bloom, George Homer, Phillipsburg (21)
 Bloom, Lawrence H., Phillipsburg (21)
 Blum, Jos. M., 128 Mill st., Trenton (11)
 Blum, Karl M., 310 Main st., Orange (7)
 Blumberg, Jack, 1028 E. Jersey st., Elizabeth (20)
 Blythe, Roland P., 115 Walnut st., Cranford (20)
 Bogdan, E. A., Smalley ter. & Grove, Irvington (7)
 Bohl, Louis J., 1051 Main st., Paterson (16)
 Bonyng, H. A., 107 Prospect st., Ridgewood (16)
 Bootay, Fred S., 607 Washington av., Belleville (7)
 Borrow, Benjamin, Bound Brook (18)
 Bortonc, Frank, 2765 Boulevard, Jersey City (9)
 Boselli, Emile, H., 614 14th st., Union City (9)
 Bossard, Henry B., Phillipsburg (21)
 Bossert, Chas. L., 707 Pacific av., Atlantic City (1)
 Botbyl, B. W., 927 Madison av., Paterson (16)
 Boulden, George P., Belle Mead (18)
 Bove, Joseph, 306 Lincoln av., Orange (7)
 Bowen, Horace, 2787 Boulevard, Jersey City (9)
 Bowies, Harry H., Overlook Hospital, Summit (20)
 Bowman, A. K., 272 Nassau st., Princeton (11)
 Bowyer, Frank F., 50 Gifford av., Jersey City (9)
 Boyer, Charles G., Annandale (10)
 Boylan, Lawrence B., 630 Main st., Paterson (16)
 Boyle, Thomas P., 2 Gouverneur st., Newark (7)
 Boysen, Theodore, Egg Harbor (1)
 Boozan, W. E., 1020 E. Jersey st., Elizabeth (20)
 Bradford, Stella S., 16 Seymour av., Montclair (7)
 Bradley, Robt. A., 101 S. Ind. av., Atlantic City (1)
 Bradshaw, John H., 27 High st., Orange (7)
 Brady, Thomas S., 678 Ave. C, Bayonne (9)
 Brancato, Peter, 17 Church st., Paterson (16)
 Brandenberg, L. W., 4620 Boulevard, Union City (9)
 Branin, Howard S., Millville (6)
 Brasfield, Edgar N., Phillipsburg (21)
 Braum, Gus A., 391 Bergen st., Newark (7)
 Braunstein, S. C., 424 13th st., W. New York (9)
 Braunstein, Wm. P., 648 Hudson av., Union City (9)
 Breitstadt, Chas. A., 259 Roseville av., Newark (7)
 Brennan, John P., 511 State st., Camden (4)
 Brennoch, Thos. McG., 3 Webster av., Jer. City (9)
 Brevoort, Henry H., Lodi (16)
 Brewer, William, Woodbury (8)
 Brick, Benjamin K., Marlton (3)
 Brick, G. J., 43 Cottage st., Jersey City (9)
 Brien, William M., 449 Main st., Orange (7)
 Brim, Anne J. S., 373 William st., East Orange (7)
 Brinkerhoff, H. H., 126 Jewett av., Jersey City (9)
 Briody, James F., 385 Main st., Paterson (16)
 Briody, Henry E., 385 Main st., Paterson (16)
 Brittain, Elmer G., Bound Brook (18)
 Broadnax, Mary E., 83 Lincoln Park, Newark (7)
 Brock, Howard F., 417 W. Broad st., Westfield (20)
 Brody, M. S., 84 Bayard st., New Brunswick (12)
 Broesser, H. V., H'b'k'n B'k for Sav'gs, H'b'k'n (9)
 Brokaw, Chris. A., 628 Newark av., Elizabeth (20)
 Brooke, C. R., 13 Pennington st., Newark (7)
 Brooke, William W., 915 Ave. C, Bayonne (9)
 Brothers, J. H., 128 Broad st., Newark (7)
 Brotman, H. A., 565 Bergen st., Newark (7)
 Brotman, Morton M., 90 Avon av., Newark (7)
 Brown, Chester R., 22 Midland av., Arlington (7)
 Brown, C. T., Prudential Ins. Co., Newark (7)
 Brown, F. L., 67 Livingston av., N. Brunswick (12)
 Brown, Harvey S., Freehold (13)
 Brown, J. C., 101 S. Indiana av., Atlantic City (1)
 Brown, Jas. S., 43 S. Fullerton av., Montclair (7)
 Brown, L. G., 173 Madison av., Elizabeth (20)
 Brown, Lewis W., 904 Sanford Ave., Irvington (7)
 Brown, Richard J., 211 Roseville av., Newark (7)
 Brouwer, Frank, Toms River (15)
 Brozdowski, J. J., 554 1/2 Jer. av., Jersey City (9)
 Bruder, A. J., 344 Fairmount av., Jersey City (9)
 Brundage, Phillip E., Cresskill (2)
 Bruington, S. S. 115 Spruce st., Newark (7)
 Bryan, Jos. H., 221 Asbury av., Asbury Park (13)
 Buck, A. O., 405 W'tster av., Elizabeth (20)
 Buckley, Charles F., Edgewater (2)
 Buckley, J. L., 684 Franklin av., Nutley (7)
 Buckner, R. W. H., 157 Somerset st., Newark (7)
 Buermann, Robert, Lakewood (15)
 Buermann, William, 9 Lincoln Park, Newark (7)
 Bull, William J., 98 Park st., Montclair (7)
 Bulwinkle, Frederick, Atlantic Highlands (13)
 Bumsted, C. V. R., 235 Grafton av., Newark (7)
 Bunn, F. C., 30 Hillyer st., Orange (7)
 Bunnell, Frederick N., Barnegat (15)
 Bunting, P. DuB., 712 N. Broad st., Elizabeth (20)
 Burkett, W. J., Pitman (8)
 Burne, John J., 17 Gould av., Newark (7)
 Burnett, Charles B., Main st., South River (12)
 Burnett, Thos. F., 121 Court st., Elizabeth (20)
 Burns, Edward L., 261 Broad st., Newark (7)
 Burritt, Norman W., 364 Spring'fd av., Summitt (20)
 Burrows, Garfield C., 118 States av., Atl. City (1)
 Busch, Herman, 38 Johnson av., Newark (7)
 Bush, Archer C., 40 Union av., Montclair (7)
 Bush, Ralph K., 131 E. Park av., Merchantville (4)

- Butcher, Charles, Heislerville (6)
 Butler, Eustice C., 249 Bloomfield av., Caldwell (7)
 Butler, Vincent P., 349 Com'w av., Jer. City (9)
 Butterfield, A. A., 655 Main st., Passaic (16)
 Buvinger, Chas. W., 50 Wash'g'n st., E. Orange (7)
 Buzby, Benjamin F., Swedeboro (8)
 Buzby, B. Franklin, 414 Cooper st., Camden (4)
 Byington, R., Summit (20)
- Cahill, L. A., 353 Lafayette st., Newark (7)
 Caldwell, J. A., 45 S. Mountain av., Montclair (7)
 Calrone, Thos. L., Ridgefield Park (2)
 Callery, Wm. T., 4 Columbia ter., Weehawken (9)
 Camche, L. J., 94 Hawthorne av., Newark (7)
 Cameron, Ed. A., 186 S. Burnett st., E. Orange (7)
 Campbell, Duncan, Woodbury (8)
 Campbell, H. B., 392 Washington st., Newark (7)
 Campbell, W. K., 69 3d av., Long Branch (13)
 Campbell, Wellington, Short Hills (7)
 Campus, Ellis, 612 W. Front st., Plainfield (2)
 Cannon, E. A., 5362 Hudson Blvd., N. Bergen (9)
 *Canning, C. H., Manheim Apts., Atlantic City (1)
 Capuano, Giaeinto, 829 S. 14th st., Camden (4)
 Carberry, Edward T., Wharton (14)
 Carbone, Francis R., 157 Hunterdon st., Newark (7)
 Cardwell, E. P., 12 Central av., Newark (7)
 Caridi, Salvatore, 331 34th st., Woodcliff (9)
 Carlisle, John H., 129 Prospect st., Passaic (16)
 Carlough, D. J., 426 Ellison st., Paterson (16)
 Carman, F. F., 31 Lincoln Park, Newark (7)
 Carman, J. H., 602 Crescent av., Plainfield (20)
 Carnoehan, J. McD., 34 Mercer st., Princeton (11)
 Carpenter, Wm. H., Woodbury (8)
 Carr, Mary B., 1 Astor pl., Jersey City (9)
 Carrigan, Eugene S., Point Pleasant (15)
 Carrington, Wm. J., 905 Pac. av., Atlantic City (1)
 Carroll, Edgar, Main st., Dayton (12)
 Carstaphen, W. T., 619 Park av., Plainfield (20)
 Casale, John B., 200 Highland av., Newark (7)
 Casselman, A. J., 317 Pennsylvania st., Camden (4)
 Cassidy, S. H., Keyport (13)
 Cassili, A., Eliz. Gen. Hosp., Elizabeth (20)
 Cassini, Henry C., 174 Hunterdon st., Newark (7)
 Catanzaro, F., 151 Jefferson st., Passaic (16)
 Cater, Doug. A., 55 Harrison st., East Orange (7)
 Caverly, Fred S., 21 Grove st., Passaic (16)
 Chalfant, H. Bailey, Pitman (8)
 Chamberlain, A. R., 25 Lenox pl., Maplewood (7)
 Chamberlain, John L., Sergeantville (10)
 Chapman, E. J., 203 Danforth av., Jersey City (9)
 Chapman, O. P., 3 Prince st., Elizabeth (20)
 Chapman, R. W., 835 Bergen st., Newark (7)
 Chaiken, Louis, 1024 E. Jersey st., Elizabeth (20)
 Charlton, C. C., 124 S. Illinois av., Atlantic City (1)
 Chayes, Sidney, 980 Ave. C, Bayonne (9)
 Chmelnik, A. G., 919 Bergen st., Newark (7)
 Cherashore, H., 216 Franklin av., Nutley (7)
 Chesler, Mauriee, Conn. & Pac. avs., Atl. City (1)
 Chester, Saul W., 264 Graham av., Paterson (16)
 Chew, Elisha C., 603 Pacific av., Atlantic City (1)
 Chianese, C. Chester, 461 Hamilton av., Trenton (11)
 Chiger, Alex. S., 621 High st., Newark (7)
 Child, F. M., 1222 Bloomfield st., Hoboken (9)
 Child, Florence C., 317 City Hall, Trenton (11)
 Childers, Robt. J., 604 Park av., Plainfield (20)
 Choffy, Sylvester A., 160 Bidwell av., Jer. City (9)
 Chrisholm, G., 14 Boston st., Newark (7)
 Christian, A. C., 1080 Clinton av., Irvington (7)
 Christian, Thomas B., Greystone Park (14)
 Church, F. H., Salem (17)
 Ciccone, Anthony C., 389 Grand st., Paterson (16)
 Clark, A. S., 614 Park av., New York City (12)
 Clark, Chas. Eugene, 462 Bramhall av., Jer. City (9)
 Clark, Ernest B., Westmont (4)
 Clark, Frank G., White House Station (10)
 Clark, John H., 12 Walnut st., Newark (7)
 Clark, S. W., 152 S. No. Carolina av., Atl. City (1)
 Clark, Wm. A., 140 West State st., Trenton (11)
 Clarke, Edward W., West Englewood (2)
 Clarke, F. M., 47 Paterson st., N. Brunswick (12)
 Clarkin, Jos. A., 905 S. 16th st., Newark (7)
 Clawson, Marcus L., 420 Park av., Plainfield (20)
 Clay, Thos. A., 351 Totowa av., Paterson (16)
 Clayton, John C., Freehold (13)
 *Clement, E., 124 King's Hwy., W. Haddonfield (4)
 Clement, L. B., 124 King's Hwy., W. Haddonfield (4)
 Clements, William R., Woodbury (8)
 Cline, C. H., Hackettstown (21)
 Clippinger, R. D., Vineland (6)
 Closson, Edward W., Lambertville (10)
 Cobham, Jas. L., 78 Brinkerhoff st., Jersey City (9)
 Coble, Morris S., 427 State st., Perth Amboy (12)
 Cochrane, Cleland D., Closter (2)
 Coe, Richard, 75 Lincoln Park, Newark (7)
 Coen, Lawrence E., 24 Washington av., Clifton (16)
 Cody, Harry C., 283 Ave. C, Bayonne (9)
 Cogan, Henry, 128 Carroll st., Paterson (16)
 Coghlan, Jasper, 17 Academy st., Newark (7)
 Cohn, Herman, 393 Clinton av., Newark (7)
 Cohn, Royal M., 740 Clinton av., Newark (7)
 Cohen, Harry F., 660 Jersey av., Jersey City (9)
 Cohen, Herman, 393 Clinton av., Newark (7)
 Cohen, Herman N., 714 Park av., Hoboken (9)
 Cohen, Herman, 489 Jersey av., Jersey City (9)
 Cohen, Sidney L., 9 Hillside av., Newark (7)
 Cohen, M., 106 Valley rd., Montclair (7)
 Cole, Blee, Newton (19)
 Cole, L. Frank, 240 Bloomfield av., Passaic (16)
 Colfax, Wm. S., Barthlof av., Pompton Lakes (16)
 Collier, Martin H., Camden Co. Hosp., Lakew'd (4)
 Collier, Wm. S., 1000 S. Broad st., Trenton (11)
 Collins, H. J., 1160 Hamilton av., Trenton (11)
 Collins, Jas. J., Main st., Woodbridge (12)
 Collins, Lawrence M., Greystone Park (14)
 Coleman, Austin H., Clinton (10)
 Coleman Joseph G., Hamburg (19)
 Coish, LeRoy, 202 Maplewood av., Maplewood (7)
 Comando, Harry N., 690 Clinton av., Newark (7)
 Comfort, John B., 50 S. Clinton av., Trenton (11)
 Comora, Herm., 317 16th st., W. New York (9)
 Compano, Francis A., 424 15th st., Union City (9)
 Commorato, J. R., 262 Montgomery st., J. City (9)
 Conaway, Walt P., 1723 Pac. av., Atlantic City (1)
 Condon, John F., 686 Mt. Prospect av., Newark (7)
 Condon, Wm. J., 50 Livingston av., N. Bruns. (12)
 Cone, Ralph S., Westwood (2)
 Conlon, Philip, 25 James st., Newark (7)
 Connamacher, H. S., 571 Springfield av., Newark (7)
 Connell, John, 977 Summit av., Jersey City (9)
 Connell, Emmet J., 174 Virginia av., Jer. City (9)
 Connel, John N., 55 Lincoln st., Jersey City (9)
 Connelly, J. A., 212 W. State st., Trenton (11)
 Connolly, John J., 30 Wallac pl., Newark (7)
 Connolly, Richard N., City Hospital, Newark (7)
 Connolly, Thos. W., T'st Co. Bldg. of N.J., J. City (9)
 Connolly, T. Vincent, 84 Ward st., Paterson (16)
 Connor, Clarence A., Fort Lee (2)
 Connor, Thomas F., Bogota (2)
 Conoly, J. H., 300 Monmouth st., Gloucester (4)
 Conoly, Lucy N., 601 Walnut st., Camden (4)
 Conrad, Edgar K., Hackensack (2)
 Conroy, John C., Burlington (3)
 Cony, Anthony J., 318 48th av., Union City (9)
 Cook, Hugh, 443 Broad st., Newark (7)
 Cook, Mary, 12 James st., Newark (7)
 Cooke, Wm. H., 303 Main st., East Orange (7)
 Cooley, H. S., 58 Front st., Freeport (13)
 Cooper, Edward P., Parsippany (14)
 Cooper, J. Howard, East Millstone (18)
 Corbusier, H. D., 612 Park av., Plainfield (20)
 Corio, George A., 309 Clinton av., Trenton (11)
 Corn, David, Ridgefield Park (2)

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- Cornwell, Alfred W., Bridgeton (6)
 Corrigan, Geo. F., 344 Lafayette st., Newark (7)
 Corrigan, Patrick H., 1720 Broad st., Trenton (11)
 Corsan, Allen, Ocean City (5)
 Corson, Elton S., Bridgeton (6)
 Corson, Filbert R., 3529 Pacific av., Atl. City (1)
 Corwin, Theo. W., 671 Broad st., Newark (7)
 Cosgrove, Samuel A., 254 Union st., Jersey City (9)
 Costello, William Francis, Dover (14)
 Costill, Henry B., 371 Hamilton av., Trenton (11)
 Cotton, Henry A., State Hospital, Trenton (11)
 Cotton, N. T., 219 Graham av., Paterson (16)
 Cottone, R. J., 683 Princeton av., Trenton (11)
 Cottrell, J. S., 159 Market st., Perth Amboy (12)
 Coughlan, Ella A., 10 Oakwood av., Orange (7)
 Coughlin, F. C., 519 George st., New Brunswick (12)
 Coughlin, Thos. F., 1006 Park av., Hoboken (9)
 Coultas, Aldo B., Madison (14)
 Coward, Edwin H., 1423 Pacific av., Atlantic City (1)
 Cox, John C., 187 Maplewood av., Maplewood (7)
 Cracco, Fred A., 51 Palisade av., Union City (9)
 Craig, Burdette, 15 Exchange pl., Jersey City (9)
 Cramer, Alfred J., 211 N. 5th st., Camden (4)
 Crandall, John Kenneth, Fort Lee (2)
 Crane, Bernard, 306 Pacific av., Atlantic City (1)
 Crane, Charles G., 78 Farley av., Newark (7)
 Crane, J. Welling, State Prison, Trenton (11)
 Crane, N. T., Bound Brook (18)
 Crankshaw, C. W., Pru. Ins. Co., Newark (7)
 Craster, Chas. V., 381 Parker st., Newark (7)
 Crawford, Georgiana V., 28 Carnegie av., E. Or. (7)
 Craythorn, C. J., 302 W. State st., Trenton (11)
 Crecca, Wm. D., 111 Park av., Newark (7)
 Cregar, Peter B., 420 Grant av., Plainfield (20)
 Cremens, John F., 144 Carroll st., Paterson (16)
 Creswell, Willis W., 48 Warren st., Newark (7)
 Crist, W. A., 725 Coll'gsw'd av., W. Collingswood (4)
 Cronk, E. Irving, Livingston av., N. Brunswick (12)
 Cropper, Chas. W., 2540 Boulevard, Jersey City (9)
 Cropsey, Charles D., Rutherford (2)
 Crouse, David R., 84 Bloomfield av., Passaic (16)
 Crowley, Leo F., 148 Belmont av., Jersey City (9)
 Crowley, Jos. W., 4005 Westville av., Camden (4)
 Crowe, Aldrich C., Ocean City (6)
 Cryder, Millard, Cape May Court House (5)
 Culver, Geo. M., 27 Glenwood av., Jersey City (9)
 Culver, S. Herbert, 75 Magnolia av., Jersey City (9)
 Cummins, G. Wycoff, Belvidere (21)
 Currie, N. W., 508 Central av., Plainfield (20)
 Curry, Marcus A., Greystone Park (14)
 Curtis, Donald, Hackensack (2)
 Curtis, Howard C., Moorestown (3)
 Curtis, Elb. A., Central av., Newark (7)
 Curtis, Frank W., Stewartville (20)
 Curtis, Grant P., 312 36th st., Union City (9)
 Cuskaden, A. D., 5902 Ventnor av., Ventnor City (1)
- D'Acerno, P. A., 346 Palisade av., Union City (9)
 D'Arcy, Walt. E., 545 E. State st., Trenton (11)
 Dalton, S. Eugene, 124 S. Ill. av., Atlantic City (1)
 Daly, Bert J., 151 Ave. C, Bayonne (9)
 Daly, Edmund J., 921 Bcrgen av., Jersey City (9)
 Dandois, George F., Wildwood (5)
 Dane, Charles, 61 Scotland rd., South Orange (7)
 Dane, John, 61 Scotland rd., South Orange (7)
 Daniell, Arthur, 611 Springdale av., E. Orange (7)
 Danzis, Max, 31 Lincoln Park, Newark (7)
 Darby, A. Eugene, Ocean City (5)
 Darlington, Emlen P., New Lisbon (3)
 Darnall, Wm. Edg., P. O. Box 1126, Atlantic City (1)
 Daron, S., 61 West st., Newark (7)
 Davenport, Geo. S., 61 Passaic av., Passaic (16)
 Davenport, Peter B., 764 S. Or. av., Newark (7)
 Davey, Thomas N., 41 W. 33rd st., Bayonne (9)
 Davis, Albert B., 511 Cooper st., Camden (4)
 Davis, Byron G., 1500 Pac. av., Atlantic City (1)
- Davis, Jacob M., Burlington (3)
 Davis, Lester R., 59 Chancellor av., Newark (7)
 Davis, Richard A., Salem (17)
 Davis, Stanton H., 420 Park av., Plainfield (20)
 Davis, W. Price, Morton Hotel, Atlantic City (1)
 Davidson, H. S., 131 S. Car. av., Atlantic City (1)
 Davidson, Louis L., 190 Clinton av., Newark (7)
 Davison, R. W., 200 W. State st., Trenton (11)
 Day, Grafton E., Frazer & N. J. avs., Coll'gsw'd (4)
 Day, Samuel Thomas, Port Norris (6)
 Dayton, S. T. Englewood (2)
 Decker, Chas. T., 215 Prospect st., Westfield (20)
 Decker, Clinton L., 40 S. Kingman rd., S. Orange (9)
 Decker, Frederick H., Frenchtown (10)
 Decker, Henry B., 527 Penn. st., Camden (4)
 De Cesare, F. D., 17 W. Clay st., Roselle Park (20)
 DeFuccio, Chas. P., 47 Glenwood av., Jer. City (9)
 DeFronzo, M., 180 Fairmont av., Newark (7)
 DeGroff, Eugene E., Woodstown (17)
 DeGroot, George S., Mendham (14)
 DeMeritt, Chas. L., 1225 Bloomfield st., Hoboken (9)
 DePons, S. C., 30 Reckless pl., Red Bank (13)
 DeStanley, Percy, 810 Broad st., Newark (9)
 DeVausney, Winif'd S., 27 Fulton st., Newark (7)
 DeYoe, Leon E., 6021 Broadway, Paterson (16)
 Deibert, Irwin E., 618 State st., Camden (4)
 Del Deo, Nicholas V., 47 1/2 State st., Newark (7)
 Del Duca, Vincent, 919 S. 5th st., Camden (4)
 Demarest, F. F. C., 657 Main av., Passaic (16)
 Demarest, Lawrence M., 228 S. O. av., So. Or. (7)
 Denelsbeck, J. O., 878 E. State st., Trenton (11)
 Denes, O., 205 Franklin av., Nutley (7)
 Denig, Ralph D., Hackensack (2)
 Dengler, Henry P., Springfield (20)
 Dennin, Jos. W., 308 Chestnut st., Roselle (20)
 Dennis, John, 1739 N. st., N. W., W'nington, D.C. (7)
 Dennis, L. A., 315 Stevens av., Union City (9)
 Denniston, Frank, Point Pleasant (15)
 Denton, P. P., 951 Madison av., Paterson (16)
 Deriveaux, John A., 103 Clinton av., Newark (7)
 Devan, T. A., Univ. Hosp., Rochester, N. Y. (12)
 Devlin, Frank, 617 Broadway, Newark (7)
 Devlin, Hugh J., 72 Thomas st., Newark (7)
 Dexter, Harriet E. T., 903 Ave. C, Bayonne (9)
 Dezer, Charles N., Englewood (2)
 Dias, Joseph L., 568 Broad st., Newark (7)
 Dickinson, G. K., 280 Montgomery st., Jer. City (9)
 Diffenbach, R. H., 570 Mt. Prospect st., Newark (7)
 Dilger, Fred'k G., 417 Palisade av., Cliffside Pk (9)
 Dillingham, W. I., 431 15th st., W. New York (9)
 Dinglestedt, R. H., 68 Hudson st., Hoboken (9)
 Dingman, N. M., 351 Van Houten st., Paterson (16)
 Dingman, Thos. A., 330 Broadway, Paterson (16)
 Disbrow, E. C., Toms River (15)
 Disbrow, G. Ward, 126 Mountain av., Summit (20)
 Disbrow, Vanderhoef M., Lakewood (15)
 Diverty, Henry B., Woodbury (8)
 Dix, J. Morgan, 344 Main st., Metuchen (12)
 Dodd, Edw. L., 131 Forest st., Belleville (7)
 Dodd, Raymond C., 18 Snowden pl., Glen Ridge (7)
 Dodge, Walter, 361 Cleveland st., Orange (7)
 Donahue, Wm. J., 173 Roseville av., Newark (7)
 Dodson, Lewis W., 592 Jersey av., Jersey City (9)
 Dolan, Andrew J., 26 Warner av., Jersey City (9)
 Dolgonos, Moses, 862 Ave. C, Bayonne (9)
 Dolmatch, A., 783 Boulevard, Bayonne (9)
 Donahue, Wm. J., 173 Roseville av., Newark (7)
 Donnelly, Robt. J., 26 Wallace pl., Newark (7)
 Donoho, Al. P., Walnut & Center, M'chantville (4)
 Donohoe, Lucius F., 140 West 8th st., Bayonne (9)
 Donohue, Frank B., Aleegany, New York (16)
 Donovan, Joseph, Greystone Park (14)
 Donovan, William F., Brielle (13)
 Door, Henry B., Ocean Grove (13)
 Doran, Wm. G., 921 Bergen av., Jersey City (9)
 Doremus, Widmer E., 32 Fulton st., Newark (7)

- Douress, P. C., 802 E. State st., Trenton (11)
 Dowd, Amb. F., 239 Broadway, Newark (7)
 Dowling, Charles E., 215 Park av., Orange (7)
 Downs, Roscius I., Riverside (3)
 Downs, Elwood E., Swedesboro (8)
 Draesel, Chas., 509 Highpoint av., Union City (9)
 Dragonetti, Edvige N., 177 Clifton av., Newark (7)
 Drake, Daniel E., Newfoundland (16)
 Drake, L. B., Newfoundland (16)
 Drake, Paul F., Phillipsburg (21)
 Drury, Alfred J., 3 Westville av., Roselle Park (20)
 Dubell, John E., Columbus (3)
 Dubois, M. G., 769 High st., Newark (7)
 duBuse, L. C. Victor, 476 Jefferson av., Elizabeth (20)
 Duckett, Warren J., 2600 Boulevard, Jer. City (9)
 Duffy, James J., 136 Summit av., Jersey City (9)
 Dukes, Howard R., 220 Kearny av., Kearny (9)
 Duncan, Owsley B., 218 Broadway, Paterson (16)
 Dunham, Henry B., Greenlock (4)
 Duncker, Frederick W., 15 Court st., Newark (7)
 Dunlap, Thos. G., 47 Virginia av., Atlantic City (1)
 Dunning, Walt L., 533 River st., Paterson (16)
 Durham, R. E., Manheim Apts., Atlantic City (1)
 Durrah, F. F., 310 Plainfield av., Plainfield (20)
 Dwyer, Henry E., 261 Madison av., Passaic (16)
 Dwyer, Wm. A., 99 Park av., Paterson (16)
- Eagleton, Wells P., 15 Lombardy st., Newark (7)
 Eaton, Arthur T., 201 4th av., Haddon Heights (4)
 Ebenfield, Samuel W., 344 High st., Newark (7)
 Eckert, William, 46 Palisade av., Union City (9)
 Eckhardt, Ralph A., Madison (14)
 Eckes, Joseph, 199 Hancock av., Jersey City (9)
 Edelen, James J., 189 Amherst st., E. Orange (7)
 Edgar, Joseph A., 71 Congress st., Jersey City (9)
 Edwards, George L., Bogota (2)
 Edwards, James B., Leonia (2)
 Edwards, Sarah M., 207 Summer av., Newark (7)
 Eghert, Edward H., Vinland (6)
 Einhorn, Rosa, 468 Clinton av., Newark (7)
 Ekins, Frank P., 221 Broadway, Paterson (16)
 Ellis, Alfred L., 169 Maple av., Metuchen (12)
 Ellis, Alexander, 513 Broadway, Camden (4)
 Elliot, Daniel, 44 Bleeker st., Newark (7)
 Elmer, Matthew K., Bridgeton (6)
 Elwell, Alfred M., 407 Cooper st., Camden (4)
 Ely, Lancelot, Somerville (18)
 Emerson, Linn, Metropolitan Bldg., Orange (7)
 Emory, G. B., 1 Franklin st., Morristown (7)
 Englander, C., 41 Hillside av., Newark (7)
 English, James R., 51 Cypress st., Newark (7)
 English, John T., 702 Stuyvesant av., Irvington (7)
 English, Samuel B., Glen Gardner (10)
 Epler, Don A., 45 Hillside av., Newark (7)
 Epstein, Harry H., 225 Perry st., Trenton (11)
 Epstein, Henry B., 31 Lincoln Park, Newark (7)
 Erler, Eugene W., 119 No. 5th st., Newark (7)
 Ernest, R. B., 2401 W. State st., Trenton (11)
 Essertier, Edward P., Hackensack (2)
 Evans, James L., 893 Park av., Woodcliffe (9)
 Evans, Winborne D., 2704 W'tville av., Camden (4)
 Ewen, Warren L., Salem (17)
 Ewens, Arthur E., 3600 Pac. av., Atlantic City (1)
 Ewing, Harvey M., 31 Lincoln Park, Newark (7)
 Ewing, Leslie H., Berlin (4)
- Facciolo, Frank, 562 Boulevard, Bayonne (9)
 Fagan, Jas. L., 419 George st., N. Brunswick (12)
 Fahrenbruch, F. D., Mt. Holly (3)
 Failing, B. E., 71 Washington st., Newark (7)
 Fairbanks, Warren H., Freehold (13)
 Faison, John B., 45 Glenwood av., Jersey City (9)
 Fa Nelli, Antonio, 469 Lowrie st., P. Amboy (12)
 Farden, Joseph L., 342 Roseville av., Newark (7)
 Farmer, Vincent, Hackensack (2)
 Farr, John C., Jr., 75 Tenth st., Hoboken (9)
 Farr, Irving L., 214 Walnut st., Montclair (7)
 Farrell, John A., Rockefeller Foundation, N. Y. (20)
 Farrow, J. Willard, Dover (14)
 Faughnan, Rose, 97 High st., Passaic (16)
 Faulkingham, R. J., 61 Livingston, N. Bruns. (12)
 Fauquier, Leonard B., 204 Arlington av., J. City (9)
 Featherston, Dan'l F., 506 4th av., Asbury Park (13)
 Fee, Elam K., Main st., Lawrenceville (11)
 Fechner, Julius, 138 W. Kinney st., Newark (7)
 Feher, L. A. M., 196 Somerset st., N. Bruns. (12)
 Feigenoff, L., 78 Hamilton av., Paterson (16)
 Feit, Herman, 5 Bentley av., Jersey City (9)
 Fell, Alton S., 529 E. State st., Trenton (11)
 Ferenczi, Louis J., 33 Edward, Bayonne (9)
 Ferguson, C. C., 89 Van Heypen av., Jersey City (9)
 Fern, S. S., 122 Elizabeth av., Newark (7)
 Ferris, Sanford J., 321 9th st., Newark (7)
 Pewsmith, Joseph L., 120 Second av., Newark (7)
 Field, Frank L., Far Hills (18)
 Fielding, William M., Allendale (2)
 Filkins, Cedric E., Audubon (4)
 Fine, M. J., 31 Lincoln Park, Newark (7)
 Fineberg, Jacob, 116 Bergen av., Jersey City (9)
 Finger, Fred'k A., 938 Ave. C, Bayonne (9)
 Fink, A. E., 82 Baldwin av., Newark (7)
 Finke, Charles H., 317 York st., Jersey City (9)
 Finke, George W., Hackensack (2)
 Finke, John H. D., Hackensack (2)
 Finkler, Rita S., 642 High st., Newark (7)
 Finn, Frederick A., 921 Bergen av., Jersey City (9)
 Fischer, John S., 20 S. Jackson av., Atlantic City (1)
 Fischer, Stella C., 4401 Westfield av., Camden (4)
 Fischer, W. C., 731 Mt. Prospect av., Newark (7)
 Fish, Clyde M., W. Wash. av., Pleasantville (1)
 *Fisher, Claudius R. P., Bound Brook (18)
 Fisher, James A., Pitkin Bldg., Asbury Park (13)
 Fisher, Percy C., Ridgewood (2)
 Fisler, C. Frank, Clayton (8)
 Fithian, George W., 266 High st., Perth Amboy (12)
 Fitch, Thomas, 916 Park av., Plainfield (20)
 Fitzpatrick, Ed. F., 574 Warren st., Newark (7)
 Flachs, Adolph, 347 Lafayette st., Newark (7)
 Flagge, Frederick W., Rockaway (14)
 Flaherty, M. E., 36 Glenwood av., Jersey City (9)
 Fleming, Charles Leroy, Pennsgrove (17)
 Flint, Edgar, Raritan (18)
 Fliteroft, William, 510 River st., Paterson (16)
 Flood, G. Balleray, 279 Broadway, Paterson (16)
 Flower, Morris A., 1007 Broad st., Newark (7)
 Flynn, Thomas H., Somerville (18)
 Foltz, H. S., Vinland (6)
 Fooder, Horace M., Williamstown (8)
 Forman, Howard S., 640 Bergen av., Jer. City (9)
 Forman, Archibald C., 41 W. 32d st., Bayonne (9)
 Forney, Norman N., Main st., Milltown (12)
 Fort, J. Irving, 306 Roseville av., Newark (7)
 Forte, Frank S., 456 Roseville av., Newark (7)
 Forsyth, Kenneth C., 533 Broadway, Newark (7)
 Foster, Frank L., 320 Springfield, Cranford (20)
 Foster, George II., Rockaway (14)
 Foster, Herbert W., 10 The Crescent, Montclair (7)
 Foster, W. S., 233 Mt. Prospect av., Newark (7)
 Fowler, R. M., Jr., 112 N. Ind av., Atlantic City (1)
 Fox, J. W., Hillsdale (2)
 Fox, William W., 101 S. Indiana av., Atl. City (1)
 Francis, Adaline M., Somerville (18)
 Franckle, Cornelius S., Millville (6)
 Frank, Morris, 921 Ave. C, Bayonne (9)
 Frank, Myrtle G., P. O. Box 62, Egg Harbor (1)
 Franklin, C. C., 1109 Hamilton av., Trenton (11)
 Franklin, I. H., 191 Palisade av., Jersey City (9)
 Franklin, Louis, 191 Palisade av., Jersey City (9)
 Frederick, Gus. H., 349 Camden st., Newark (7)
 Freeland, Frank, Hackensack (2)
 Freeman, Richard D., 52 Vose av., So. Orange (7)
 Freile, William, 25 Tonnele av., Jersey City (9)

- Friedmann, L. L., 486 Princeton av., Trenton (11)
 Freinkel, J., 100 Avon av., Newark (7)
 Frisch, Fred., 3603 Pac. av., Atlantic City (1)
 Fritts, Herbert Harold, Siloh (6)
 Forbisher, Hamilton B., Teaneck (2)
 Frost, I. F., 26 Maple av., Morristown (14)
 Froelich, J. C., 74 Ingraham pl., Newark (7)
 Frohwein, Ida H., 119 Morriss'tn rd., Elizabeth (20)
 Frundt, Oscar C., 92 Bartholdi av., Jersey City (9)
 Fuchs, Jacobs N., 1267 S. Broad st., Trenton (11)
 Fuhrmann, Barclay Stokes, Flemington (10)
 Fulper, Theodore R., Hampton (10)
 Funk, Joseph, 615 Elizabeth av., Elizabeth (20)
 Funkhouser, Ed. B., State Hospital, Trenton (11)
 Furman, Benj. A., 31 Roseville av., Newark (7)
 Furst, Nathan J., 190 Johnson av., Newark (7)
- Galloway, Geo. E., 109 Milton av., Rahway (20)
 Gamon, Robert S., 558 Newton av., Camden (4)
 Gandy, Charles M., Ocean City (5)
 Ganley, Arthur J., 390 Park av., East Orange (7)
 Gantz, Emma O., 215 N. Grove st., E. Orange (7)
 Gardam, Joseph W., 16 Longfellow av., Newark (7)
 Gardner, John W., 626 Ocean av., Jersey City (9)
 Gariss, Joseph L., 34 W. State st., Trenton (11)
 Garrabrant, Clarence, 191 N. Penn., Atl. City (1)
 Garrett, Harry S., Park Ridge (2)
 Garrison, B. H., 23 Monmouth st., Red Bank (13)
 Garrison, Walter Sherman, Cedarville (6)
 Gauch, William, 177 Elwood av., Newark (7)
 Gauzza, Valentine P., Fords, N. J. (12)
 Geary, Russell D., Riverside (3)
 Geeswein, Carl A., Keyport (13)
 Gehring, G. P., 2439 F st., San Diego, Cal. (1)
 Gennell, Ernest, 278 Parker st., Newark (7)
 Gerendasy, J., 956 E. Jersey st., Elizabeth (20)
 German, George B., 511 Cooper st., Camden (4)
 Gershenfeld, D. B., 20 Hillside av., Newark (7)
 Gerstley, M., 2787 Boulevard, Jersey City (9)
 Giacalone, Vincenzo, Vineland (6)
 Giambra, S. M., 23 Church st., Paterson (16)
 Gibb, Alice S., 345 Union av., Elizabeth (20)
 Gibb, W. Blake, Madison (14)
 Gibbs, Jonathan C., 34 Spring st., Trenton (11)
 Gifford, W. Royal, 247 Park av., East Orange (7)
 Giglio, A. S. V., 230 Christine st., Elizabeth (20)
 Gilady, Ralph, Hackensack (2)
 Gilbert, H. J., 588 Broadway, Newark (7)
 Gilbertson, R. L., Madison (14)
 *Giles, Eilleen L., Bridgeton (6)
 Gille, Hugo, 149 Congress st., Jersey City (9)
 Gillett, H. E., Ramsey (2)
 Gillson, H. V., 21 Lee pl., Paterson (16)
 Gillson, John T., 170 Broadway, Paterson (16)
 Gilpin, Friend B., 118 North av., Cranford (20)
 Ginsberg, Geo., 624 Bloomfield av., Hoboken (9)
 Ginsberg, Samuel, 136 Bloomfield av., Passaic (16)
 Glasgow, Thos., 120 Passaic av., Passaic (16)
 Glass, Benj. E., 609 Waterbury av., Plainfield (20)
 Glasston, H. M., 528 N. Wood av., Linden (20)
 Glazebrook, F. H., 6 Altmont Court, Morristown (14)
 *Glendon, Walter P., Bridgeton (6)
 Glover, Lawrence L., 232 King's Hwy., Haddonf'd (4)
 Gnasso, E. R., Fort Lee (2)
 Gochman, H. M., 166 Hamilton, Paterson (16)
 Goff, F. J., Red Bank (13)
 Goffman, Emanuel, 67 Valley rd., Montclair (7)
 Goeller, J. D., 1165 W. Clinton av., Irvington (7)
 Goldberg, Benj. M., 1156 E. State st., Trenton (11)
 Goldberg, David, Westwood (2)
 Goldberg, E. H., 238 Kearny av., Kearny (9)
 Golding, Harry N., 180 Carroll st., Paterson (16)
 Goldstein, A., Lakewood (15)
 Goldstein, Hyman I., 1425 Broadway, Camden (4)
 Goldstein, Wm. H., 281 Kearny av., Kearny (7)
 Good, George, 949 Park av., Union City (9)
- Goodrich, S. L., 19 Vreeland av., Jersey City (20)
 Goodwin, William M., 75 Congress st., Newark (10)
 Gordon, Altamont L., Burlington (3)
 Gordon, Charles D., Mt. Arlington (14)
 Gordon, C. H., 808 E. State st., Trenton (11)
 Gordon, I. L., 1815 Boulevard, Jersey City (9)
 Gordon, Osher, 114 Prospect st., Passaic (16)
 Gorson, Samuel F., 2005 Pac. av., Atlantic City (1)
 Gosling, W. W., 23 Monmouth av., Red Bank (13)
 Goudy, Elmer S., 187 Kearny av., Kearny (9)
 Gould, J. H., 696 Ave. C, Bayonne (9)
 Grady, Wm. F., 42 N. Fullerton av., Montclair (7)
 Graff, Effie R., Somerville (18)
 Graham, Archibald F., 42 Park av., Paterson (16)
 Granelli, M. S., 68 Hudson st., Hoboken (9)
 Granger, L. Y., 28 Richmond st., Newark (7)
 Graves, William B., 426 Main st., E. Orange (7)
 Gray, Charles M., Vineland (6)
 Gray, John W., 142 Clinton av., Newark (7)
 Green, David W., Salem (17)
 Green, J. S., 463 N. Broad st., Elizabeth (20)
 Green, William H., 230 Bank st., Newark (7)
 Greenberg, Lewis, Lodi (2)
 Greenberg, Samuel, 46 Johnson av., Newark (7)
 Greenbaum, S., 400 Belmont av., East Orange (7)
 Greene, A. D., 195 Palisade av., W. Hoboken (9)
 Greenfield, Bernard H., 691 Clinton av., Newark (7)
 Greengrass, Jacob L., 179 B'way, Paterson (16)
 Greifinger, M. H., 225 Pomona av., Newark (7)
 Greissinger, Karl, 422 20th st., W. New York (9)
 Grier, Robert M., Box 424, Pleasantville (1)
 Griesmier, Zadoc L., 126 3d av., E. Roselle (20)
 Grieve, James, 88 Market st., Perth Amboy (12)
 Griffiths, Chauncey B., 31 Lincoln Park, Newark (7)
 Grimes, Jesse R., Dumont (2)
 Gruessner, Anthony, 153 Somerset, N. Bruns. (12)
 Guidi, Guido M., 212 Christine st., Elizabeth (20)
 Guillium, Wm. H., 504 Fourth av., Asbury Park (13)
 Guion, Edw., Northfield Asylum, Northfield (1)
 Gutmann, Benj., 116 Livingstn st., N. Bruns. (12)
 Gutowski, Jos. M., 338 High st., Perth Amboy (12)
- Hachett, Leon, Washington (21)
 Hagen, Orville R., 170 Broadway, Paterson (16)
 Hagerty, John F., 30 Wallace pl., Newark (7)
 Haggerty, D. L., 227 N. Warren st., Trenton (11)
 Hagney, Fred W., 699 Elizabeth av., Newark (7)
 Hahn, William, 15 Lombardy st., Newark (7)
 Hahn, P. S., Blackwell st., Dover (14)
 Haight, H. W., Highland Park, N. Brunswick (12)
 Haines, Edgar J., Medford (3)
 Haines, J., Ridgway, Mt. Holly (3)
 Haines, Mabel S., 600 White H'se Pike, Audubon (4)
 Haines, Wm. H., 600 White Horse Pike, Audubon (4)
 Haines, Willets P., Ocean City (5)
 Haley, J. J., 851 Monmouth, Gloucester City (4)
 Haley, Mark J., 3 N. Granville av., Atlantic City (1)
 Haldeman, Robert E., Mt. Holly (3)
 Hall, William J., 438 E. State st., Trenton (11)
 Hallett, Frederick S., Hackensack (2)
 Halligan, Earl J., 254 Montgomery st., Jer. City (9)
 Hallock, W. J., Berkley Heights, Summit (20)
 Halperin, Clement J., 641 High st., Newark (7)
 Halperin, Sophia L., 271 Palisade av., Union City (9)
 Halpern, H., Englewood (2)
 Halsey, Levi W., 61 Church st., Montclair (7)
 Halstead, Charles F., Somerville (18)
 Hamill, Patrick J., 50 Journal Sq., Jersey City (9)
 Hamilton, B. C., 83 2nd av., Newark (7)
 Hamilton, Lloyd A., Lambertville (10)
 Hampton, G. R., Greystone Park (14)
 Hanan, James T., 11 The Crescent, Montclair (7)
 Hance, Irwin Howell, Lakewood (15)
 Hanrahan, J. M., 1144 E. Broad st., Elizabeth (20)
 Harden, Albert S., 540 Warren st., Newark (7)
 Hardenberg, D. S., 347 Comip'w av., Jersey City (9)

- Harhen, Geo. E., 22 Brookside av., Caldwell (7)
 Harley, H. L., 1714 Pacific av., Atlantic City (1)
 Harman, Wm. J., 190 W. State st., Trenton (11)
 Harmon, Byron M., Essex Co. San., Verona (10)
 Harmon, Harry M., Frenchtown (10)
 Harreys, Chas. W., 306 Broadway, Paterson (16)
 Harrington, Carey L., Woodbury (8)
 Harris, Allen, Greenwich (6)
 Harris, Edwin A., Stratford (4)
 Harrison, J. B., 302 E. Broad st., Westfield (20)
 Hart, Hugh M., 300 Mt. Prospect av., Newark (7)
 Harter, Louis F., 174 Bower st., Jersey City (9)
 Hartman, H. W., Keyport (13)
 Harvey, Edwin H., 20 N. Florida av., Atl. City (1)
 Harvey, John W., 40 W. 35th st., Bayonne (9)
 Harvey, T. W., 59 Main st., Orange (7)
 Harvey, Thos. W., Jr., 59 Main st., Orange (7)
 Haseltine, S. L., 410 Westminster, Elizabeth (20)
 Hasking, A. P., 318 Montgomery st., Jersey City (9)
 Hauck, Lydia B., 644 Stuyvesant av., Irvington (7)
 Hauck, Wm. H., 644 Stuyvesant av., Irvington (7)
 Hauck, Wm. J., 207 Mt. Prospect av., Newark (7)
 Haussling, Francis R., 661 High st., Newark (7)
 Haven, Samuel C., 14 Elm st., Morristown (14)
 Hawkes, E. Zeh., 84 Washington st., Newark (7)
 Hay, Joseph S., 255 High st., Perth Amboy (12)
 Haywood, Harry, 3 Elm Row, New Brunswick (12)
 Heath, Louanna, 20 Fairmount av., Newark (7)
 Hedges, B. Van D., Watchung av., Plainfield (20)
 Hedges, Ellis W., Watchung av., Plainfield (20)
 Hegeman, Runkle F., Somerville (18)
 Heil, A. Arling, Milford (10)
 Heilbrunn, Julius, 2787 Boulevard, Jersey City (9)
 Heintzelman, B. S., 19 W. 33d st., Bayonne (9)
 Hekimian, J. H., 468 Palisade av., Weehawken (9)
 Helff, J. R., Teaneck (2)
 Heller, Nathan B., 189 16th av., Newark (7)
 Hemsath, John, 36 Spruce st., Newark (7)
 Henion, Em'l L., 16 Church st., Paterson (16)
 Henn, Louis D., Watchung av., Plainfield (20)
 Henry, F. C., 254 State st., Perth Amboy (12)
 Henry, F. C., Jr., 254 State st., Perth Amboy (12)
 Henry, George, Flemington (10)
 Hepburn, William M., Freehold (13)
 Herbener, Eugene Garfield, Lakewood (15)
 Herman, John H., 197 S. Center st., Orange (7)
 Herrman, W. G., Pitkin Bldg., Asbury Park (13)
 Herndon, L. S., 35 Johnson av., Newark (7)
 Herold, Harvey T., 850 S. 13th st., Newark (7)
 Herold, Herman C. H., 1115 Broad st., Newark (7)
 Herradora, J. R., Hud. Co. Tbc. San., Secaucus (9)
 Hewson, James S., 374 Avon av., Newark (7)
 Hess, Louis E., E. Bolton av., Absecon (1)
 Hexamer, Fred, 50 Lyons av., Newark (7)
 Heyman, Arthur, 105 Tracy av., Newark (7)
 Hicks, William H., 46 Milford av., Newark (7)
 Higgins, G. L., 175 Ocean av., Jersey City (9)
 Higgins, Joseph F., 607 Center st., Trenton (11)
 Higgins, Thomas A., 565 Summit av., Jer. City (9)
 Hill, J. A., Allenhurst (13)
 Hill, William F., 108 Grand st., Jersey City (9)
 Hillegas, E. J., Mantua (8)
 Hilliard, William T., Salem (17)
 Hird, Emerson Freeman, Bound Brook (18)
 Hires, Nathaniel S., Salem (17)
 Hirschberg, Samuel, 615 High st., Newark (7)
 Hirsh, Samuel, 118 Lexington av., Passaic (16)
 Hirst, E. Reed, 586 Federal st., Camden (4)
 Hirst, Levi B., 586 Federal st., Camden (4)
 *Hitchcock, Wm. E., 53 Belleville av., Newark (7)
 Hoagland, Bonn W., Barron av., Woodbridge (20)
 Hoagland, Lewis B., Oxford (21)
 Hobert, Richard T., 191 Bellevue av., U. Monte'r (7)
 Hoeller, Wm. F., 808 S. 11th st., Newark (7)
 Hoening, Chas. L., 928 Hudson st., Hoboken (9)
 Hofer, Clarence A., Metuchen (12)
 Hoffman, Florentine M., Bayard st., N. Bruns. (12)
 Hoffman, Peter, 2683 Boulevard, Jersey City (9)
 Hoheb, A. S., Rutherford (2)
 Holden, E., Jr., 217 Broadway, Newark (7)
 Holler, Henry G., 234 Montclair av., Newark (7)
 Hollingshead, Irv. W., 123 S. 18th st., Phila., Pa. (3)
 Hollingshead, Lyman, B., Pemberton (3)
 Hollingshed, B. S., 600 Benson st., Camden (4)
 Hollinshead, Ralph K., Westville (8)
 Holloway, J. Morgan, 633 Bergen av., Jer. City (9)
 Holmes, G. A., 1077 E. Jer. av., Elizabeth (20)
 Holmes, George J., 17 Elizabeth av., Newark (7)
 Holmes, T. J. E., 119 Hamilton av., Paterson (16)
 Holt, E. Z., Children's Seashore Home, Atl. City (1)
 Holters, Otto R., 513 2d av., Asbury Park (13)
 Holtzman, M., 167 2d av., Elizabeth (20)
 Hommell, P. E., 689 Bergen st., Jersey City (9)
 Hood, Philip G., 19 Lincoln Park, Newark (7)
 Hoops, Harold J., 167 Ege av., Jersey City (9)
 Hoover, A. R., 5 Prince st., Elizabeth (20)
 Horn, J. Fred'k, South st., Morristown (14)
 Hornberger, J. Howard, Roebling (3)
 Horner-Roger, C. L., 721 Cooper st., Camden (4)
 Horre, G. W. H., 960 E. Jersey st., Elizabeth (20)
 Horsford, Fred C., 305 Broadway, Newark (7)
 Hosp, Paul H., 842 S. 12th st., Newark (7)
 Hotwet, Henry A., Clifton ter., Weehawken (9)
 Howard, J. E., 67 Main st., Haddonfield (4)
 Howley, B. M., 419 George st., N. Brunswick (12)
 Hubbard, F. E., 65 Church st., Montclair (7)
 Hubbard, H. H. V., 420 Central av., Plainfield (20)
 Hubbard, Samuel T., Hackensack (2)
 Huber, Wm. H., 15 Salem st., Newark (7)
 Huberman, J., 853 S. 12th st., Newark (7)
 Hudson, W. J., P. O. Box 343, Pleasantville (1)
 Huff, Edmund N., Englewood (2)
 Hughes, Frank R., Cape May (5)
 Hughes, Fred'k J., 706 Park av., Plainfield (20)
 Hughes, Lee W., 1019 Broad st., Newark (7)
 Hughes, J. Vernon, 665 Main av., Passaic (16)
 Hughes, Thomas E., 223 Cooper st., Camden (4)
 Hulett, Albert G., 20 Hawthorne av., E. Orange (7)
 Hummel, Ernest G., 414 Cooper st., Camden (4)
 Hummel, L. H., Salem (17)
 Hunt, A. C., 625 Middlesex av., Metuchen (12)
 Hunt, Jay J., 997 Ave. C, Bayonne (9)
 Hunt, M. M., 16 Jackson st., South River (12)
 Hunt, Ralph H., 29 Harrison st., East Orange (7)
 Hunter, Edward R., Delanco (3)
 Hunter, James, Jr., Westville (18)
 Hurff, Joseph E., Blackwood (4)
 Hurff, Joseph W., 86 Washington st., Newark (7)
 Huserl, Siegfried, 777 Clinton av., Newark (7)
 Hutchinson, A. D., 913 W. State st., Trenton (11)
 Hutcheson, Chas. R., 317 Cooper st., Camden (4)
 Hyman, Charles, 1925 Pac. av., Atlantic City (1)
 Iams, Samuel H., 34 Mercer st., Princeton (11)
 Ill, Carl, H., 188 Clinton av., Newark (7)
 Ill, Charles L., 188 Clinton av., Newark (7)
 Ill, Edgar Alex., 1004 Broad st., Newark (7)
 Ill, Edward J., 1004 Broad st., Newark (7)
 Ill, Herbert M., 188 Clinton av., Newark (7)
 Imbleau, J. E. L., Morris av., Union (20)
 Ingling, Harry W., Freehold (13)
 Introcaso, D. A., 45 Crescent av., Jersey City (9)
 Ireland, Milton S., 23 S. Cal. av., Atlantic City (1)
 Irwin, Jas. R., 330 Washington av., Belleville (7)
 Irwin, J. H., Englewood (2)
 Irvin, John S., 1910 Pacific av., Atlantic City (1)
 Ives, Edward I., Stevens pl., Little Falls (16)
 Ivins, W. C., 214 E. Hanover st., Trenton (11)
 Jack, H. Wesley, 920 Haddon av., Collingswood (4)
 Jacks, Oscar, 476 Mercer st., Jersey City (9)
 Jacob, Albert N., Sparta (19)

- Jackson, Chas. H., 1250 Park Blvd, Camden (4)
 Jackson, Albert F., Hillside ave., Nutley (7)
 Jackson, E. C., 98 Washington av., E. Orange (7)
 Jackson, George G., 20 Milford av., Newark (7)
 Jacob, William H., 99 N. Main st., Paterson (16)
 Jacobson, Fred C., 1074 Broad st., Newark (7)
 Jacques, J. Eugenia, 74 Waverly st., Jersey City (9)
 Jaffin, Abraham E., 41 Emory st., Jersey City (9)
 Jamison, Wm. F., Bradley Beach (13)
 Janifer, Clarence S., 208 Parker st., Newark (7)
 James, Henry C., May's Landing (1)
 James, William H., Pennsville (17)
 James, W. L., Englewood (2)
 Jarmulowsky, Harry, 29 Church st., Paterson (16)
 Jarratt, R. B., Pennsgrove (17)
 Jarrett, Harry, 925 Broadway, Camden (4)
 Jaspan, Samuel C., 820 Division st., Trenton (11)
 Jaso, James V., 274 Littleton av., Newark (7)
 Jedel, Myer, 125 Fourth st., Newark (7)
 Jennings, Charles H., N. Centre, Merchantville (4)
 Jennings, W. B., King's Highway, E. Haddonfield (4)
 Jentz, John H., 980 Summit av., Jersey City (9)
 Jessurun, S. H., 613 High st., Newark (7)
 Johnson, Charles H., 632 Benson st., Camden (4)
 Johnson, Earl V., 3200 Pac. av., Atlantic City (1)
 Johnson, F. C., 62 Bayard st., N. Brunswick (12)
 Johnson, George L., 27 High st., Morristown (14)
 Johnson, H. F., 915 Kensington av., Plainfield (20)
 Johnson, J. F., 209 Main st., Chatham (14)
 Jones, J. Morgan, 295 Prospect st., Ridgewood (9)
 Jones, Ralph R., Toms River (15)
 Jordan, J. C., Manasquan (13)
 Joseph, Morris, 271 Lexington av., Passaic (16)
 Joyce, L. H., 259 Madison st., Passaic (16)
 Jukofsky, I. D., Ridgefield Park (2)
 Just, Francis, 564 High st., Newark (7)
 Justin, A. W., 41 Fulton st., Weehawken (9)
 Justin, J. C., 1074 Dearborn rd., Palisade (9)
- Kaighn, Chas. B., 905 Pacific av., Atlantic City (1)
 Kain, Thomas M., 403 Cooper st., Camden (4)
 Kain, Wm. W., Cape May C't H'se, R.F.D., 1 (4)
 Kalter, Geo. E., 640 Prospect st., Maplewood (7)
 Kane, Chas. J., 349 Grant st., Paterson (16)
 Kaplan, Benjamin E., 695 Clinton ave., Newark (7)
 Kaufman, Ernest W., 2225 River road, Camden (4)
 Kaufman, Jerome G., 299 Clinton ave., Newark (7)
 Karshmer, N., 422 George st., New Brunswick (12)
 Kasman, H. A., 406 Broadway, Long Branch (13)
 Kauffman, Louis J., Millville (6)
 Kaufhold, Frank, 41 Leslie st., Newark (7)
 Kaufman, Ignatz, 190 Clinton ave., Newark (7)
 Kaufman, M. J., 319 Belmont ave., Newark (7)
 Kay, Clarence R., Peapack (18)
 Kearney, John V., 372 Berg'line av., Union C'y (9)
 Keating, C. A., 177 Ellison st., Paterson (16)
 Keegan, Thos., D., 135 Arlington av., Jersey City (9)
 Keeley, Chas. B., 921 Bergen av., Jersey City (9)
 Keeney, Caldwell B., 137 Summit av., Summit (20)
 Keim, William F., 25 Roseville av., Newark (7)
 Keir, F. E., Englewood (2)
 Keller, Franklin J., 795 Broadway, Paterson (16)
 Keller, Paul, Beth Isreal Hospital, Newark (7)
 Keller, Sidney C., 22 Hill st., Newark (7)
 Kelly, Bernard S., 203 Harrison av., Jersey City (9)
 Kent, M. M., 233 N. Warren st., Trenton (11)
 Kemey, Imre, Carteret (12)
 Kenney, J. A., 132 W. Kinney st., Newark (7)
 Kenyon, H. M., Bergenfield (2)
 Kerns, Francis J., 556 Warren st., Newark (7)
 Kern, E. Clarence, 45 Park st., Montclair (7)
 Kessler, Henry B., 666 Clinton av., Newark (7)
 Kice, Henry W., Wharton (14)
 Kiefer, Raymond A., 18 Church st., Paterson (16)
 Kilduffe, Robert A., 104 Roosevelt pl., Atl. City (1)
 Kildee, Henry A., Essex Co. Hosp., Cedar Grove (7)
- Kilts, W. S., Bogota (2)
 Kim, Gay Bong, 720 Main st., Paterson (16)
 King, Alden P., Milltown (12)
 Kinch, Fred A., 267 E. Broad st., Westfield (20)
 King, George W., Laurel Hill, Secaucus (9)
 King, Chester A., Oradel (2)
 *Kinne, Porter S., 575 E. 28th st., Paterson (16)
 Kinney, S. T., 250 Main st., South Amboy (12)
 Kirkman, L. G., 176 Roseville av., Newark (7)
 Kirkwood, Allan S., 61 Elm st., Montclair (7)
 Klaus, Henry, 435 Palisade av., Union City (9)
 Klein, Edward C., Jr., 209 Littleton av., Newark (7)
 Klein, E. F., 136 Market st., Perth Amboy (12)
 Klein, Emanuel, 680 Clinton av., Newark (7)
 Klein, Ignatz, 471 Springfield av., Newark (7)
 Klein, Wm., 85 Bayard st., New Brunswick (12)
 Kleiner, Samuel, 229 Broad st., Paterson (16)
 Klenk, J. P., 328 Belleville av., Bloomfield (7)
 Klugman, Louis W., 375 Ave. C., Bayonne (9)
 Kline, Oran R., 414 Cooper st., Camden (4)
 Knepp, Richard E., Hackensack (2)
 Knauer, Geo., 930 Elizabeth av., Elizabeth (20)
 Knight, Augustus S., Gladstone (18)
 Knight, I. Warner, Pitman (8)
 Knight, Sam'l R., 212 Jersey av., Spring Lake (13)
 Knowles, James S., Millville (6)
 Knowles, Frederick E., Boonton (14)
 Knox, Charles A., Ridgefield Park (2)
 Knox, Harriet L., Hackensack (2)
 Koch, Louis A., 16 Chestnut st., Newark (7)
 Kolb, J. M., 725 Syms av., Union City (9)
 Kooperman, Benj., 321 16th st., W. New York (9)
 Koplín, N. H., 142 W. State st., Trenton (11)
 Koppel, Joseph, 921 Bergen av., Jersey City (9)
 Koppel, Leo A., 921 Bergen av., Jersey City (9)
 Krone, W. F., 39 Lincoln Park, Newark (7)
 Korngut, Samuel, 306 First av., Elizabeth (20)
 Kraker, David A., 31 Lincoln Park, Newark (7)
 Krans, Clara DeH., 920 Park av., Plainfield (20)
 Krans, Edw. S., 920 Park av., Plainfield (20)
 Kramer, S. E., 121 Market st., Perth Amboy (12)
 Krauss, F. Irwin, Chatham (14)
 Kremens, Max M. B., 711 Pacific av., Atl. City (1)
 Kresch, Philip, 42 W. 22d st., Bayonne (9)
 Kuder, Joseph M., Mount Holly (3)
 Kuehne, Richard, 1118 Summit av., Jersey City (9)
 Kuhl, Paul E., 48 N. Clinton av., Trenton (11)
 Kuhlman, Alvin E., 527 Union pl., Union City (9)
 Kummel, M., 315 Central av., East Newark (7)
- Laird, Geo. S., 127 Central av., Westfield (20)
 Lake, W. A., Erma (5)
 Lambert, F. E., 157 Ocean av., Jersey City (9)
 Lamson, Wm. J., 120 Summit av., Summit (20)
 Lamy, A. W., 560 Newark av., Rahway (20)
 Lance, E. W., 78 W. Milton av., Rahway (20)
 Lane, Austin W., 59 Prospect st., East Orange (7)
 Lane, Arthur K., Greystone Park (14)
 Lane, Frank B., 33 Woodland av., East Orange (7)
 Landis, Edwin W., Stillwater (19)
 Lange, Louis C., 20 Clifton ter., Weehawken (9)
 Larrabee, C. H., 30 Beechwood rd., Summit (20)
 Largay, Arthur O., 929 Ave. C., Bayonne (9)
 La Riew, Fred J., Washington (21)
 Larkey, Charles J., 700 Ave. C. Bayonne (9)
 Larson, H. M., 36 Franklin st., Morristown (14)
 Lathrop, Frederick W., 507 Park av., Plainfield (20)
 Lathrope, Geo. H., 1019 Broad st., Newark (14)
 Lauterborn, T. W., Essex Sanitorium, Verona (7)
 Lavine, B. D., 630 N. Clinton av., Trenton (11)
 Lawrence, M. J., 279 Mt. Prospect av., Newark (7)
 Lawrence, George W., Lakewood (15)
 Lawrence, W. H., Jr., 129 Summit av., Summit (20)
 Lawrence, Henry R., 711 Pacific av., Atl. City (1)
 Lawnsing, G. Condi, 443 22d st., W. New York (9)
 Lawton, Anderson A., Somerville (18)

- Leaver, Morris H. Quakertown (10)
 Leavitt, John F., 522 N. 3rd st., Camden (4)
 Label, Louis J., 165 Grant av., Nutley (7)
 Lee, Fred P., Dept. of Health, Paterson (16)
 Lee, Harry W., Woodbury (8)
 Lee, Stephen G., 55 Halsted st., East Orange (7)
 Lee, Thomas B., 527 Penn ave., Camden (4)
 LeFavor, Dean H., Palmyra (3)
 LeFevre, Adriennet L., Blackwood (4)
 Lefferts, Franklin P., Belvidere (21)
 Leggett, L. H., Jr., 330 E. Broad st., Westfield (20)
 Leggett, T. H., Jr., 706 Park av., Plainfield (20)
 Leighton, R. L., 401 Ludlow av., Spring Lake (13)
 Leining, Albert, 1 Fourth st., Weehawken (9)
 Lemmerz, T. H., 141 Magnolia av., Jersey City (9)
 Leonard, G. F., 63 N. 5th av., New Brunswick (12)
 Leonard, Isaac E., 2842 Atl. av., Atlantic City (1)
 Leonard, Lothair L., 615 Asb'y av., Asb'y Park (13)
 Leonardis, J. V., 94 Jefferson st., Newark (7)
 Lerman, I., 1024 E. Jersey st., Elizabeth (20)
 Levendusky, D. E., 52 2d av., Passaic (16)
 Levin, Louis, 140 W. State st., Trenton (11)
 Levin, M. L., 209 Avon av., Newark (7)
 Levine, Israel, 106 Bowers st., Jersey City (9)
 Levine, Israel, 215 Broadway, Paterson (16)
 Levine, S. C., 253 Hamilton av., Paterson (16)
 Levinsohn, S. A., 282 Broadway, Paterson (16)
 Levitas, George M., Westwood (2)
 Levy, Julius, 66 Baldwin av., Newark (7)
 Levy, A., Somerville (18)
 Lewis, Alfred A., 12 De Hart, Morristown (14)
 Lewis, Alice B., Ridgewood (2)
 Lewis Geo, R., 458 Washington av., Belleville (7)
 Lewis, Livingston L., 712 Wash. st., Hoboken (9)
 Lewis, Stewart, Lakehurst (15)
 Lewis, Thos. K., 47 S. 27th st., Camden (4)
 Leyenberger, S. B. W., 310 Mt. Pros't st., N'w'k (7)
 Liefeld, Walter L., 657 Main av., Passaic (16)
 Limeburner, C. A., 95 Linwood av., Ridgefield (9)
 Linares, A. C., 402 Market st., Paterson, (16)
 Linden, Mortimer H., 45 Clendeny av., J. City (9)
 Lindenbaum, H., 2707 S. Norm'die, Los Ang. (9)
 Lindley, C. N., 1236 Van Ness av., Los Ang. (15)
 Lippard, A. T., 209 Hollywood av., Hillside (20)
 Lippincott, A. H., 406 Cooper st., Camden (4)
 Lippincott, L. Y., 156 E. 7th st., Plainfield (20)
 Little, William R., Pennington (11)
 Littwin, Charles, 1036 Anderson av., Palisade (2)
 Liva, Arcangelo, Rutherford (2)
 Livengood, B. A., Swedesboro (8)
 Livengood, H. R., 587 Westminster av., Eliz. (20)
 Livingston, Paul., 299 Main st., East Orange (7)
 Lloyd, Reba, Bridgeton (6)
 Lobsenz, Nathan P., 294 Broadway, Paterson (16)
 Lobo, J. P., 72 E. Jersey st., Elizabeth (20)
 Lockwood, F. W., 237 Prospect st., E. Orange (7)
 Lomauro, Jas. R., Passaic & Grand st., Passaic (16)
 London, Wm., 256 State st., Perth Amboy (12)
 Londrigan, J. F., 327 Washington st., Hoboken (9)
 Long, Herb. W., 102 Jefferson st., Newark (7)
 Long, Miles T., 226 Monticello av., Jersey City (9)
 Long, P. A., 20 Livingston av., New Brunswick (12)
 Long, William H., Jr., Somerville (18)
 Longbotham, G. T., 208 Dunellen, Dunellen (12)
 Longsdorf, Harold E., Mount Holly (3)
 Loper, John C., Bridgeton (6)
 Lore, Andrew P., Palmyra (3)
 Lore, Harry E., Cedarville (6)
 Love, Elizabeth F., Moorestown (3)
 Lovell, Fred'k H., 1013 Clinton av., Irvington (7)
 Lovell, J. F., 1011 Clinton av., Irvington (7)
 Lovett, Irving K., 15 Wallace, Red Bank (13)
 Lovett, Jos. C., Municipal Hospital, Camden (4)
 Lovejoy, J., Bound Brook (18)
 Low, Frederick C., High Bridge (10)
 Low, Donald B., 529 Broadway, Paterson (16)
 Lowitz, Otto, 78 Clinton av., Newark (7)
 Lowrey, James H., 79 Congress st., Newark (7)
 Lowy, Otto, 190 Clinton av., Newark (7)
 Luban, Benjamin, 730 High st., Newark (7)
 Lucas, H. H., 170 Van Houten st., Paterson (16)
 Lucent, S. Bell, Little Falls (16)
 Luck, Paul, 74 Lexington av., Passaic (16)
 Lufburrow, C. B., 441 W. Front st., Plainfield (20)
 Luippold, E. J., 85 Columbia ter., Weehawken (9)
 Lummis, C. Percy, Bridgeton (6)
 Lummis, Marshall F., Pitman (8)
 Lund, John L., 267 High st., Perth Amboy (12)
 Lundblad, Walt. E., 555 William st., E. Orange (7)
 Luongo, Fred'co, 212 Centre st., Orange (7)
 Lurie, Sol. L., 21 Hillside av., Newark (7)
 Lupin, Edward E., 727 Ave. C, Bayonne (9)
 Lynch, Roland J., 93 Fairview av., Jersey City (9)
 Lynn, John V., Ridgefield (2)
 Lyon, Charles H., Phillipsburg (21)
 Lyon, Leslie C., Magnolia (4)
 Lyon, Earl Crosby, Bridgeton (6)
 Lyons, James V., 333 Park av., Orange (7)
 MacArthur, C., 172 Roseville av., Newark (7)
 Macalister, Alex., 582 Federal st., Camden (4)
 MacAlister, W. W., 333 Van Houten, Paterson (16)
 Macdonald, W. S., 56 Church st., Montclair (7)
 MacDowell, John L., 113 Market st., P. A'b'y (12)
 MacGregor, A. W., 379 Ellison st., Paterson (16)
 MacKeller, James Malcolm, Tenafly (2)
 MacLaren, W. S., 35 Boudinot st., Princeton (11)
 MacMillan, Wright, 657 Main av., Passaic (16)
 MacPherson, Elwood H., 12 R'w'ly pl., Millburn (7)
 McArthur, Charles, 31 Lincoln Park, Newark (7)
 McBride, Andrew F., 30 Church st., Paterson (16)
 McBride, Hesser G., 1702 S. Or. av., Newark (7)
 McCabe, Thomas S., 913 Broad st., Newark (7)
 McCallion, W. H., 33 Prince st., Elizabeth (20)
 McCamey, Kenneth E., 174 Carroll st., Paterson (16)
 McCauley, F. J., 31 Lincoln Park, Newark (7)
 McConaghy, Thos. P., 1017 C'per st., Camden (4)
 McConaughy, Francis, Somerville (18)
 McCormack, Frank G., Englewood (2)
 McCormick, D. L., 9 Tichenor st., Newark (7)
 McCormick, W. M., 266 Market st., P. Amboy (12)
 McCoy, John C., 292 Broadway, Paterson (16)
 McCroskery, J. H., 206 N. Arlington av., E. Or. (7)
 McCullough, J. H., 523 E. State st., Trenton (11)
 McDannalds, William S., Tenafly (2)
 McDede, Frank F., 922 Main st., Paterson (16)
 McDede, Jos. Searle, 215 Ege av., Jersey City (9)
 McDermid, Lynden E., Main st., Hightstown (11)
 McDonald, F. R., 345 Comm'pw av., Jer. City (9)
 McDonald, J. O., 194 W. State st., Trenton (11)
 McDonald, Richard J., 80 Park av., Paterson (14)
 McDonnell, G. E., Mt. Holly (3)
 McElhinney, D. R., 110 W. Jer. st., Elizabeth (20)
 McElroy, Ervin, Rockaway (14)
 McEwen, Floy, 299 Belleville av., Newark (7)
 McFeeley, Percy R., Bogota (2)
 McGeehan, S. M., Ryanhurst Apts., Atl. City (1)
 McGivern, Chas. S., 101 S. Indiana av., Atl. City (1)
 McGovern, J. F., 24 Livingston av., N. Bruns. (12)
 McGuffie, R. N., 125 Prospect st., Passaic (16)
 McGuire, James J., 122 W. State st., Trenton (11)
 McIlvaine, William Earle, Ridgefield Park (2)
 McIver, Woody, 405 Westminster av., Eliz. (20)
 McKiernon, Robt. L., 97 Bayard st., N. Br'w'k (12)
 McKinstry, Frank P., Washington (21)
 McLaughlin, Geo. E., 765 Summit av., Jer. City (9)
 McLean, Herbert E., 92 Fairview av., Jer. City (9)
 McLean, Hugh A., 414 17th st., W. New York (9)
 McLean, John J., 92 Fairview av., Jersey City (9)
 McLellan, Geo. A., 19 Hawthorne av., E. Orange (7)
 McLoughlin, F. J., 558 Jersey av., Jersey City (9)

- McLeod, N. S., 418 George st., New Brunswick (12)
 McMahon, B. C., 185 South st., Morristown (14)
 McMurtrie, W. A., 26 Maple av., Morristown (14)
 McNenney, C. E., 113 Fairview av., Jersey City (9)
 McVay, Edward A., 234 Lafayette st., Newark (7)
- Mass, Max A., 329 Clinton av., Newark (7)
 Mabey, J. C., 242 Clairmont av., Montclair (7)
 Mace, Margaret, Wildwood (5)
 Macfarland, B. W., Br'd St. Bk. Bldg., Trent'on (11)
 Mack, George L., Bound Brook (18)
 Mackey, D. E., 175 Washington st., Bloomfield (7)
 Mackey, Margaret, Stegman Pkwy., Jer. City (9)
 *Machlin, A., 211 Lexington av., Passaic (16)
 Maciejewski, A. S., 212 Van Bruen st., Newark (7)
 Maclay, Joseph A., 239 Broadway, Paterson (16)
 Mackintosh, M. A., 237 Broadway, Paterson (16)
 Mackler, Louis, 16 S. Maryland av., Atl. City (1)
 Madden, Leland Sanford, Pleasantville (1)
 Madden, T. W., 16 Frazer av., Collingswood (4)
 Madden, W. F., 324 S. Broad st., Trenton (11)
 Magennis, B. C., 170 Hilton av., Paterson (16)
 Magner, John J., Hackensack (2)
 Magner, James P., 726 Ave. C, Bayonne (9)
 Mahaffey, Jesse L., 408 Cooper st., Camden (4)
 Mayhew, Charles H., Millville (6)
 Makin, J. B., Fitkin Building, Asbury Park (13)
 Malatesta, C. S., 720 Watchung, Plainfield (20)
 Mallalieu, F. W., 16 Monticello av., Jer. City (9)
 Manly, Thos. E., 313 Parker st., Paterson (16)
 Manahan, D. V., Monmouth Beach (13)
 Mancusi-Ungaro, E., 156 Mt. Prospect, Newark (7)
 Mancusi-Ungaro, L., 156 Mt. Prospect, Newark (7)
 Mangone, Geo. F., 191 Palisade av., Union City (9)
 Mann, Jacob J., 255 State st., Perth Amboy (12)
 Maps, Howard L., 53 Passaic av., Passaic (16)
 Maras, Peter E., 80 Tonnele av., Jersey City (9)
 Marcus, Jos. H., 101 S. Newton av., Atl. City (1)
 Marcarian, Henry B., 904 Cooper st., Camden (4)
 Marey, Alexander, Jr., Riverton (3)
 Marcy, John W., E. Park st., Merchantville (4)
 Margulis, Boris, 339 Hawthorne av., Newark (7)
 Marks, Edward G., 655 Kearny av., Arlington (7)
 Marks, David M., 298 4th st., Jersey City (9)
 Mark, Joseph S., 102 Green st., Woodbridge (12)
 Markens, Edward W., 422 High st., Newark (7)
 Markowitz, Irwin, 2157 Boulevard, Jersey City (9)
 Markowitz, Louis, 189 Graham av., Paterson (16)
 Marschak, Martin, 679 Ave. C, Bayonne (9)
 Marsh, E. J., 400 Van Houten st., Paterson (16)
 Marshall, Lawrence H., 669 Ferry av., Camden (4)
 Marshall, Jos. C., 1517 Pacific av., Atlantic City (1)
 Marshall, Randolph, Tuckahoe (5)
 Martin, William, Ryanhurst Apts., Atl. City (1)
 Martin, William P., 25 Holland rd., S. Orange (7)
 Martine Frank L., 182 Roseville av., Newark (7)
 Martinetti, Carlo D., 311 Central av., Orange (7)
 Martland, Harrison S., 180 Clinton av., Newark (7)
 Marvel, P., 101 S. Indiana av., Atlantic City (1)
 Marvel, P., Jr., 101 S. Indiana av., Atlantic City (1)
 Mason, Jas. H., 3d, Ind. and Pac. avs., Atl. City (1)
 Massey, John F., 20 S. Newport av., Ventnor (1)
 Matera, Joseph, 506 Garden st., Hoboken (9)
 Matheke, O. G., 328 Sussex av., Newark (7)
 Mathews, R. H., 186 South, Morristown (14)
 Matthews, H. E., 504 Hillside av., Orange (7)
 Matthews, Leonard M., 655 Main av., Passaic (16)
 Matthews, Wm. J., 938 Hudson st., Hoboken (9)
 Mauro, V. E., 816 Boulevard, Bayonne (9)
 Maver, Wm. W., 532 Bergen av., Jersey City (9)
 May, Ernest A., 28 High st., Orange (7)
 Mazzarella, Carlo, 56 Cross st., Paterson (16)
 Meacham, E. A., 112 Stevens st., S. Amboy (12)
 Mead, Walter G., 699 Kearny av., Arlington (9)
 Means, P. B., State Hospital, Trenton (11)
 Meccray, Paul M., 405 Cooper st., Camden (4)
- Medd, John C., 25 Curtis pl., Maplewood (7)
 Meehan, Martin M., 225 Union av., Belleville (7)
 Meeker, Frank B., 360 Clifton av., Newark (7)
 Meeker, I. A., 581 Valley rd., Upper Montclair (7)
 Meier, William, Haskell (16)
 Meigh, Josiah, Bernardsville (18)
 Meinzer, Martin S., Madison av., Perth Amboy (12)
 Meloney, Lester F., 156 2d st., Clifton (16)
 Meltsner, Louis, 908 Hudson st., Hoboken (9)
 Mendelshon, D. H., 146 Broadway, Paterson (16)
 Mendelsohn, Lewis, 272 Montgomery st., J. City (9)
 Mendenhall, Clinton D., Bordentown (3)
 Mengel, Willard G., 410 Haddon av., Camden (4)
 Mentzer, C. A., 1444 N. Broad st., Hillside (20)
 Meneve, Alfred D., 87 Bridge st., Paterson (16)
 Menk, Paul E., 19 Lincoln Park, Newark (7)
 Mercer, Arch., 31 Washington st., Newark (7)
 Merliss, Eugene, 145 So. Orange av., Newark (7)
 Merrill, C. F., 16 S. 3d av., Highland Park (12)
 Merscheimer, C. H., Reservoir av., Jersey City (9)
 Messenger, Samuel J., Chrome (12)
 Metzger, Emma P. W., Riverside (3)
 MeVey, Jas. C., 2907 Pacific av., Atlantic City (1)
 Meyer, Edw. H., Mahwah, N.J. & Sufferin, N.Y. (2)
 Meyer, Wm., 436 New York av., Union City (9)
 Meyer, George P., 410 Haddon av., Camden (4)
 Meyerson, Noah, 323 16th st., W. New York (9)
 Mial, Leon'das L., 38 Elm st., Morristown (14)
 Michela, Luigi S., 206 Carroll st., Paterson (16)
 Miller, D. J. M., Calif. & Pac. avs., Atlantic City (1)
 Miller, H. Garrett, Millville (6)
 Miller, L. H., Woodstown (17)
 Miller, Jos. A., 364 Prospect st., S. Orange (7)
 Miller, Thomas B., Succasunna (14)
 Miller, M. H., 311 16th st., West New York (9)
 Mills, Alvah V., Little Falls (16)
 Mills, Charles S., Riverton (3)
 Minard, E. L., 140 4th av., East Orange (7)
 Miner, Donald, 921 Bergen av., Jersey City (9)
 Minnefor, Chas. A., 214 S. 6th st., Newark (7)
 Minningham, Wm., D., 11 Astor st., Newark (7)
 Mishell, Dan. R., 85 Lincoln Park, Newark (7)
 Mitchell, Augustus J., 59 South st., Newark (7)
 Mitchell, C. H., 1100 W. State st., Trenton (11)
 Mitchell, Chas. R., 311 Broadway, Paterson (16)
 Mockridge, O. A., 8 S. Mountain av., Montclair (7)
 Mitsakos B., 500 High st., Newark (7)
 Moffat, E. W., 76 W. Front st., Red Bank (13)
 Moister, Roger W., 7 Norwood av., Summit (20)
 Mooney, Thomas, 137 Ridge rd., N. Arlington (9)
 Montfort, R. J., 1051 E. Jer. st., Elizabeth (20)
 *Moore, Geo. R., 130 W. State st., Trenton (11)
 Moore, John D., 6 Washington av., Bloomfield (7)
 Moore, John H., Bridgeton (6)
 Moore, R. H., 86 Beechwood av., Trenton (11)
 Morgan, Browne, 32 Benson st., Bloomfield (7)
 Morley, Grace C., 1000 Hudson st., Hoboken (9)
 Morrison, Caldwell, 379 7th av., Newark (7)
 Morrison, D. L., 92 Carroll st., New Brunswick (12)
 Morrison, Frederick H., Newton (19)
 Morrison, John B., 66 Milford av., Newark (7)
 Morris, Carlyle, Woodbury (8)
 Morris, Clement, 75 Washington av., Newark (7)
 Morris, Thos. M., Watchung av., Plainfield (20)
 Morris, Watson Budlong, Springfield (20)
 Morrill, Jas. P., 310 Broadway, Paterson (16)
 Morrow, Jos. R., Isolation Hospital, Oradel (2)
 Morse, G. V., 70 Watsessing av., Bloomfield (7)
 Motzenbecker, P. F., 31 Lincoln Park, Newark (7)
 Moulton, Chas. D., 122 Park av., East Orange (7)
 Mount, Elmer, 76 Sherman pl., Jersey City (9)
 Mount, W. B., 21 Plymouth, Montclair (7)
 Mravlag, Victor, 1064 E. Jersey st., Elizabeth (20)
 Mras, J. N., State Hospital (11)
 Mueller, Geo. H., 102 Summit av., Jersey City (9)
 Muellerschoen, Geo. J., Oakland av., Ventnor (1)

- Mulford, Ephraim R., Burlington (3)
 Mullin, Raymond J., 857 S. 11th st., Newark (7)
 Munger, Ray T., Watchung av., Plainfield (20)
 Murray, Eugene W., 433 Mt. Prosp. av., Newark (7)
 Murray, H. A., 624 Mt. Prosp. av., Newark (7)
 Murn, Charles J., 48 Smith st., Paterson (16)
 Murphy, James M., 2753 Boulevard, Jer. City (9)
 Murphy, Leo J., 374 West st., Union City (9)
 Muta, Samuel A., 47 Park av., West Orange (7)
 Mutehler, H. R., Dover (14)
 Muttart, George W., 702 Ocean av., Jersey City (9)
 Mutter, Alfred A., 75 Beach st., Arlington (9)
 Myatt, Leslie E., Bridgeton (6)
 Myers, Eugene W., (no address) (20)
- Nafey, Herb't W., Highland Pk., N. Brunswick (12)
 Nash, Albert B., 10 S. 13th st., Newark (7)
 Nash, Alexander E., 20 Forest av., Verona (7)
 Nash, W. G., 20 Clinton st., Newark (7)
 Nalitt, David I., 28 W. 33rd st., Bayonne (9)
 Nature, Joseph, 172 Littleton av., Newark (7)
 Naulty, C. W., Jr., 403 High st., Perth Amboy (12)
 Nay, Chas. L., 164 Palisade av., Jersey City (9)
 Neer, William, 245 Broadway, Paterson (16)
 Neer, Frank Y., 127 Broadway, Paterson (16)
 Nelson, Aaron, 461 Jersey av., Jersey City (9)
 Nelson, Harry, Woodbury (8)
 *Nemser, Rudolph W., Jamesburg (12)
 Neves, Chas S., 281 Park av., Montclair (9)
 Nevin, Joseph A., 158 Bowers st., Jersey City (9)
 Nevin, John, 921 Bergen av., Jersey City (9)
 Neweombe, Marcus W., Brown's Mills (3)
 Newman, Ab'ham J., 42 Sherman av., Jer. City (9)
 Newman, Emanuel D., 81 New st., Newark (7)
 Newman, Louis G., 316 E. Broad st., Westfield (20)
 Nichols, Louis G., 723 Washington st., Hoboken (9)
 Nichols, Stanley H., Long Branch (13)
 Nicholson, F. P., 895 Summit av., Jersey City (9)
 Nicholson, J. L., 205 Wash. av., Haddonfield (4)
 Niemeyer, C. V., 4610 Boulevard, Weehawken (9)
 Nitoli, Rocco M., 660 E. Jersey st., Elizabeth (20)
 Noll, Louis, 1026 Clinton av., Irvington (7)
 *North, James, 6 N. Haverford av., Margate (1)
 North, Harry R., 160 W. State st., Trenton (11)
 Norton, James F., 299 Variek st., Jersey City (9)
 Noval, Wm. A., 419 Main st., Paterson (16)
 Nowrey, Jos. E., Jr., 431 Vine st., Camden (4)
 Nuse, Edward F., 550½ Jersey av., Jersey City (9)
 Nye, Howard H., 174 Carroll st., Paterson (16)
 Nydes, John, 239 Springfield av., Newark (7)
 Nyiri, William, 17 Hillside av., Newark (7)
- Oakes, Alfred E., 1158 Mary st., Elizabeth (20)
 O'Brien, Paul, East Rutherford (2)
 O'Connor, B. A., 314 N. 4th st., Harrison (9)
 O'Connor D. F., 671 Broad st., Newark (7)
 O'Connor, Jas. F., 286 Chestnut st., Kearny (9)
 O'Connor, John J., 434 Clinton av., Union City (9)
 O'Connor, M. J., 7 Durand pl., Irvington (7)
 O'Crowley, C. R., 31 Lincoln Park, Newark (7)
 O'Grady, B. J., 327 Wash. av., Hoboken (9)
 Oestmann, A. W., 932 Summit av., Jersey City (9)
 Ogden, William E., Ridge rd., Rutherford (2)
 O'Grady, Thos. F., 374 Grand st., Paterson (16)
 O'Hanlon, George, Jersey City Hospital (9)
 Okin, I., 23 Passaic av., Passaic (16)
 Olcott, George P., 23 Hamilton st., E. Orange (7)
 Older, Benj., 435 Clinton av., Union City (9)
 Oleynick, S., 107 Clinton av., Newark (7)
 Oliphant, N. B., 152 W. State st., Trenton (11)
 Olini, Jos. J., 30 Breintnall pl., Newark (7)
 Oliver, David H., Bridgeton (6)
 Olmstead, W. D., 1920 Pacific av., Atlantic City (1)
 Olpp, Archibald E., 412 15th st., Union City (9)
 O'Neill, Charles L., 11 N. 7th st., Newark (7)
 O'Neill, John H., 270 Montgomery st., Jer. City (9)
- O'Rourke, Jas. J., 871 Stuyvestant av., Trenton (11)
 Opdyke, Chas. P., 2633 Boulevard, Jersey City (9)
 Opdyke, Levings A., 55 Clinton av., Jersey City (9)
 Openchowski, M., 635 High st., Newark (7)
 Oram, Jos. H., 495 Broadway, Paterson (16)
 Orloff, Samuel, 155 Polk st., Newark (7)
 Orton, George L., 98 Elm st., Rahway (20)
 Orton, Henry B., 24 Commerece st., Newark (7)
 Oshrin, Henry, 760 Palisade av., W. New York (9)
 Osmun, Louis C., Hackettstown (21)
 Osmun, Milton M., 611 Broadway, Camden (4)
 Ost, Henry, 477 Springfield av., Newark (7)
 Ovens, Richard C., 675 Bergen av., Jersey City (9)
 Owen, Fred W., 18 Franklin pl., Morristown (14)
- Paczkowski, Thad., 194 Broad st., Bloomfield (7)
 Paddock, Royce, 1019 Broad st., Newark (7)
 Paganelli, T. Richard, 1006 Garden st., Hoboken (9)
 Pagliughi, John J., 401 18th st., Union City (9)
 Pal, Darbari R., 32 Clark st., Paterson (16)
 Palen, Gilbert J., Woodbury (8)
 Pallen, Conde de S., Roehelle Park (2)
 Palm, Howard F., 614 N. 2nd st., Camden (4)
 Palmer, Gideon H., 10 N. Munn av., E. Orange (7)
 Palmer, H. S., 257 Mulberry st., Newark (7)
 Pannell, W. L., 7 Prospect st., East Orange (7)
 Pannullo, J. N., 260 Van Bruen st., Newark (7)
 Pansay, Abraham, 12 Jackson st., South River (12)
 Pantaleone, R., 504 Hamilton av., Trenton (11)
 Parisi, A., 150 Hunterdon st., Newark (7)
 Parke, Henry, 9 Church st., Paterson (16)
 Parker, John E., 385 Park av., Orange (7)
 Parker, H. N., 72 N. Clinton st., Trenton (11)
 Parry, O. K., Kinmonth Bldg., Asbury Park (13)
 Parsonnet, Eugene V., 31 Lincoln Pk., Newark (7)
 Pascall, Thos. M., 197 Lincoln av., Newark (7)
 Paulson, Arch. M., 160 E. 7th st., Plainfield (20)
 Payne, Guy, Overbrook Hospital, Cedar Grove (7)
 Payne, Joseph, Midland Park (2)
 Peck, Ellery Newell, Boonton (14)
 Pedrick, Charles D., Glassboro (8)
 Pegau, Paul, Woodbury (8)
 Pellarin, John D., 493 Clinton av., Union City (9)
 Pellet, J., Hamburg (19)
 Pclusio, Aug. M., 269 Carroll st., Paterson (16)
 Pendexter, S. E., 11 S. Arlington av., E. Orange (7)
 Pennington, G. P., 12 S. Chelsea av., Atl. City (1)
 Pennington, J., 101 S. Indiana av., Atl. City (1)
 Pentel, Louis S., 307 16th st., W. New York (9)
 Perham, Roy G., Hasbrouek Heights (2)
 Perlberg, H. J., 921 Bergen av., Jersey City (9)
 Perlstein, F., 325 16th st., West New York (9)
 Perkel, Louis L., 3263 Boulevard, Jersey City (9)
 Perry, Frank L., Pennsgrove (17)
 Pessel, J. F., 192 W. State st., Trenton (11)
 Peters, Chas. M., 921 Bergen av., Jersey City (9)
 Peters, E. A. P., 394 Bergen av., Jersey City (9)
 Peteler, Alois, Keyport (13)
 Pettit, Herschel, Ocean City (5)
 Petry, William, 109 Treacy av., Newark (7)
 Phelan, Edward, 18 South st., Newark (7)
 Phelan, Walter F., 61 Cherry st., Elizabeth (20)
 Phelps, James, 238 Park av., Paterson (16)
 Phillips, Claude B., 891 H'ddon av., Coll'gsw'd (4)
 Phillips, R. H. C., 144 W. State st., Trenton (11)
 Phillips, Walter, Englewood (2)
 Pierson, Carl L., State Hospital, Trenton (11)
 Pierson, Theodore A., Hopewell (11)
 Pierson, Henry C., 530 Locust st., Roselle (20)
 Pignataro, Mateo, S., 37 Johnson av., Newark (7)
 Piller, Jacob, 473 Union av., Paterson (16)
 Pilkington, Albert, Amstetrdam Apts., Atl. City (1)
 Pindar, P. S., 960 Park av., Woodcliff (9)
 Pindar, William A., 975 Broadway, Woodcliff (9)
 Pindar, David B., 1100 Bloomfield av., Hoboken (9)
 Pinkerton, W. Alfred, 854 Ave. C, Bayonne (9)

- Pinneo, F. W., 439 Mt. Prospect av., Newark (7)
 Pilkington, Albert, Amsterdam Ppts., Atl. City (1)
 Pitkin, George P., Bergenfield (2)
 Platt, Thomas H., Dunellen av., Dunellen (12)
 Podel, A. Alfred, Red Bank (13)
 Poland, Geo. A., 206 E. Verona av., Pleasantville (1)
 Plume, Clarence A., Succasunna (14)
 Poland, Joseph, 1904 Pacific av., Atlantic City (1)
 *Poldolski, L. A., Seaside Hotel, Atlantic City (1)
 Pollak, Berth S., Laurel Hill, Secaucus (9)
 Polizotti, J. L., 193 Park av., Paterson (16)
 Pollock, James L., Greystone Park (14)
 Pomeranz, R., 31 Lincoln Park, Newark (7)
 Pontery, Herb't, 89 Bowers st., Jersey City (9)
 Pons, C. A., 112 Broad st., Red Bank (13)
 Poole, V. T., 72 Edgewater pl., Edgewater (9)
 Pooley, Thomas R., Jr., Newton (19)
 Potter, R. T., 86 Harrison st., East Orange (7)
 Potter, Robert C., 25 Fulton st., Newark (7)
 Povalski, A. W. T., 320 York st., Jersey City (9)
 Powell, Benjah B., Moorestown (3)
 Powell, Wm. R., 702 Market st., Camden (4)
 Powellson, A. P., (no address)
 Powis, Ethel M., 198 W. State st., Trenton (11)
 Prager, Bert A., Chatham (14)
 Prather, John W., Dumont (2)
 Pratt, C. Howard, 411 E. 5th st., Plainfield (20)
 Pratt, John E., Dumont (2)
 Pratt, William H., 516 Cooper st., Camden
 Preston, Perry B., 12 Palm st., Newark (7)
 Price, Nathaniel G., 31 Lincoln Park, Newark (7)
 Pringle, F. A., 192 Clairmont av., Montclair (7)
 Proctor, James Wm., Englewood (2)
 Proctor, Francis E., 1245 Greenw'd av., Trenton (11)
 Protzman, Thomas B., Englewood (2)
 Prout, Chas. D., 414 Sunset av., Asbury Park (13)
 Prout, Thomas P., 19 Prospect st., Summit (20)
 Prout, William B., Teaneck (2)
 Pudney, Wm. K., 11 Seymour av., Montclair (7)
 Pullen, Guy F., Leonia (2)
 Purcell, E. F., 800 Stuyvesant av., Trenton (11)
 Pursell, William Dana, Phillipsburg (21)
 Purdy, Chas. H., 35 Highland av., Jersey City (9)
 Pyle, Louis A., 89 Fairview av., Jersey City (9)
 Pyle, Wallace, 15 Exchange pl., Jersey City (9)
 Pyle, Wellden, 110 Irvington av., South Orange (7)
 Pyle, William L., 678 Bergen av., Jersey City (9)
- Quigley, Fred'k J., 4622 Boulevard, Union City (9)
 Quimby, W. O'Gorman, 14 James st., Newark (7)
 Quinn, Norman J., 3303 Pac. av., Atlantic City (1)
 Quinn, S. T., 326 S. Broad st., Elizabeth (20)
- Rado, William, 48 Wilson av., Newark (7)
 Rados, Andrew, 299 Clinton av., Newark (7)
 Ramos, Nicholas J., 188 Market st., Newark (7)
 Ramsey, Murray E., 221 Lenox av., Westfield (20)
 Ramsey, Wm. E., 240 High st., Perth Amboy (12)
 Randolph, John M., 131 Main st., Rahway (20)
 Ranson, Bris. B., 601 Ridgew'd av., Maplewood (7)
 Rathgeber, C. F., 18 William st., E. Orange (7)
 Rathgeber, Wm. M., 249 Roseville av., Newark (7)
 Raughley, William C., Taunton av., Berlin (4)
 Rauschenbach, P. E., 223 Broadway, Paterson (16)
 Rawitz, Sidney B., 190 Clinton av., Newark (7)
 Rayne, J. Edw., 116 Cherry st., Elizabeth (20)
 Read, Clinton H., 567 So. Warren, Trenton (11)
 Reason, John J., 1st av., Highland Park (12)
 Rector, Jos. M., 681 Bergen av., Jersey City (9)
 Reddan, M. W., 126 W. State st., Trenton (11)
 Reed, R. Ralston, 65 Wash. st., Morristown (14)
 Reed, F. Grendon, 52 Hill st., Morristown (14)
 Reed, Hilton S., 101 S. Ind. av., Atlantic City (1)
 Reed, James J., Ocean av., Rumson (13)
 Reeves, J. Franklin, Bridgeton (6)
 Reich, H., 765 High st., Newark (7)
- Reich, S. Albert, 972 Summit av., Jersey City (9)
 Reid, Erwin W., Garfield (2)
 Reid, John W., 1 Kearny av., Kearny (9)
 Reiner, Jacob, 517 N. Broad st., Elizabeth (20)
 Reingold, Alex., 221 Garden st., Hoboken (9)
 Reisinger, P. B., Roebing (3)
 Reismann, E., 31 Lincoln Park, Newark (7)
 Reitneauer, John S., 518 Col'bia st., Union City (9)
 Reitter, G. S., 191 Halsted st., East Orange (7)
 Remer, Daniel F., Mount Holly (3)
 Renner, Dan Smith, Skillman (18)
 Renzulli, Francesco, 288 S. 7th st., Newark (7)
 Rettig, I. L., 36 Milford av., Newark (7)
 Reyner, Daniel C., 2703 Pac. av., Atlantic City (1)
 Reynolds, Earle C., 657 Main st., Passaic (16)
 Reynolds, Harry C., 657 Main av., Passaic (16)
 Reynolds, Walter, 27 S. Ind av., Atlantic City (1)
 Rhone, David S., 1202 Haddon av., Camden (4)
 Rice, Franklin W., 184 South st., Morristown (14)
 Rice, J. Warren, 14 Kirkp'tk st., New Brunswick (12)
 Ribbans, Robert C., 63 Central av., Newark (7)
 Rich, Charles, 191 Littleton av., Newark (7)
 Rich, Harry H., 32 Broad st., Newark (7)
 Richards, J. N., Trenton (11)
 Richardson, A., 60 Orange rd., Montclair (7)
 Richardson, Charles A., Cloister (2)
 Richardson, E. M., 557 Stevens st., Camden (4)
 Ricketts, Henry E., 31 Lincoln Park, Newark (7)
 Rieck, Walt. R., 377 Kearny av., Arlington (9)
 Rieman, Aloysius, 3504 Boulevard, Jersey City (9)
 Riggins, E. N., 81 N. Arlington av., E. Orange (7)
 Riha, Wm. W., 835 Ave. C, Bayonne (9)
 Ringland, Robert F., 56 Church st., Montclair (7)
 Ripley, Charles D., Point Pleasant (15)
 Ripley, Edward W., 11 Seymour st., Montclair (7)
 Ritter, John J., Butler (16)
 Riva, Fred S., Milltown (12)
 Rizzolo, Edward M., 250 Mt. Prosp. av., Newark (7)
 Robbin, Lewis, 16 Clinton pl., Newark (7)
 Robbins, Charles M., 31 Lincoln Park, Newark (7)
 Robbins, Henry B., 144 Mercer st., Jersey City (9)
 Roberts, Edgar W., 21st & Palisade av., W.N.Y. (9)
 Roberts, Joseph E., Jr., 403 Cooper st., Camden (4)
 Robertson, Grace M., 820 2d pl., Plainfield (20)
 Robertson, Samuel E., 60 Tuscan rd., Maplewood (7)
 Robinson, Benj. A., 265 Mulberry st., Newark (7)
 Robinson, J. T., Bound Brook (18)
 Robinson, Moe, 1014 E. Grand st., Elizabeth (20)
 Robinson, Louis H., 31 Lincoln Park, Newark (7)
 Rodman, E. Warren, Beverly (3)
 Roeber, William J., 847 S. 16th st., Newark (7)
 Roemer, Jacob, 213 Broadway, Paterson (16)
 Rogers, Alvin S., 126 N. Warren, Trenton (11)
 Rogers, Edwin B., 814 Haddon, Collingswood (4)
 Rogers, Geo. G., 796 S. Orange av., Newark (7)
 Rogers, Harry L., Riverton (3)
 Rogers, L. H., Municipal Colony, Trenton (11)
 Rogers, Richard M., 1 Wallace st., Newark (7)
 Rogers, Robert H., 49 Ninth av., Newark (7)
 Rogers, W. N., 1235 Brunswick av., Trenton (11)
 Roh, Robert F., 1117 So. Orange av., Newark (7)
 Rona, Maurice, 159 Bayard st., N. Brunswick (12)
 Rosecrans, J. H., 826 Hudson st., Hoboken (9)
 Roselli, Emile H., 614 15th st., Union City (9)
 Rosenberg, Albert B., 1912 Boulevard, Jer. City (9)
 Rosenberg, J., 692 Bergen av., Jersey City (9)
 Rosenberg, L. Charles, 11 Murray st., Newark (7)
 Rosenblatt, S., 1920 Pacific av., Atlantic City (1)
 Rosenstein, Jacob, 568 Bergen av., Jersey City (9)
 Rosenstein, S. L., 557 Clinton av., Newark (7)
 Ross, Alexander S., 542 Cooper st., Camden (4)
 Rossell, Edward W., 801 Cooper st., Camden (4)
 Roth, Oswald H., 210 Littleton av., Newark (7)
 Rothenberg, S., 1 Hillside av., Newark (7)
 Rothschild, Karl, 49 Bayard st., N. Brunswick (12)
 Rothseid, Abraham, 29 Scheerer av., Newark (7)

- Rowan, Henry M., 126 W. State st., Trenton (11)
 Rowe, Norman L., 828 Grand st., Jersey City (9)
 Rowland, James J., Highlands (13)
 Rowland, J. H., 159 New st., N. Brunswick (12)
 Roy, Bert W., Sussex (19)
 Roy, Jos. N., 271 Graham av., Paterson (16)
 Rubinow, Saul M., 755 High st., Newark (7)
 Ruch, Louis, Englewood (2)
 Ruch, Valentine, Englewood (2)
 Rufe, John J., High Bridge (10)
 Rullman, Walter A., 58 W. Front st., Red Bank (13)
 Rumage, Wm. T., 232 Lafayette st., Newark (7)
 Rundlett, Emelia V., 79 Prosp. st., Jersey City (9)
 Runnells, J. E., Bon. Burn San., Scotch Plains (20)
 Runyan, Wm. J., 106 Broad st., Bloomfield (7)
 Runyon, L. P., 82 Somerset st., N. Brunswick (12)
 Runyon, Lefford, 110 Irvington av., So. Orange (7)
 Ruoff, Andrew C., 494 New York av., Union City (9)
 *Russell, A. B., 72 William st., East Orange (7)
 Russell, C. B., 119 Hamilton av., Paterson (16)
 Russell, David L., 690 Bergen av., Jersey City (9)
 Ruvane, J. J., 2680 Boulevard, Jersey City (9)
 Ryan, John N., 158 Lexington av., Passaic (16)
- Sacco, Anthony, 440 New York av., Union City (9)
 Salasin, Samuel, 511 Pac. av., Atlantic City (1)
 Salzman, Nathan, 306 Broadway, Paterson (16)
 Salmon, Leon T., Lambertville (10)
 Salvati, Leo H., 180 Elm st., Westfield (20)
 Samuel, Jerome H., 368 Clinton av., Newark (7)
 Santangelo, Stephen, 3170 Boulevard, Jer. City (9)
 Santosky, Benj. B., 162 Bergen av., Jersey City (9)
 Sarla, Michael, Hackensack (2)
 Satchwell, H. H., 640 Stuyvesant av., Irvington (7)
 Saulsberry, C. E., 75 Livingston st., N. Bruns. (12)
 Saunders, Oris W., 1700 Broadway, Camden (4)
 Savoye, R. G., 115 Central av., Westfield (20)
 Sawyer, Edmund E., 336 1st st., Hackensack (2)
 Sayre, Wm. D., 69 Maple av., Red Bank (13)
 Scammell, F. G., 40 S. Clinton av., Trenton (11)
 Scanlan, David W., 15 S. Ill. av., Atlantic City (1)
 Schaaf, Edw. O., 217 S. Orange av., Newark (7)
 Schaaf, Royal A., 413 Mt. Prospect av., Newark (7)
 Schachter, H. A., 6 Milford av., Newark (7)
 Schaefer, E. P., 12 Harrison pl., Irvington (7)
 Schall, Elmer R., 7th & Elm sts., Camden (4)
 Schauffler, W. G., 21 Morgan pl., Princeton (11)
 Schapiro, Jos., 712 Palisade av., Union City (9)
 Schectman, Vera, 557 Clinton av., Newark (7)
 Schept, S. S., 523 37th st., Union City (9)
 Schiffman, Samuel, 18 Schuyler av., Newark (7)
 Schildkraut, J. M., 170 W. State st., Trenton (11)
 Schimmelpfenning, R. D., The Cr'sc't, Mont'c'r (7)
 Schisler, Milton M., Florence (3)
 Schlein, August, 707 Park av., Hoboken (9)
 Schlichter, C. H., 556 N. Broad st., Elizabeth (20)
 Schmitz, Mathias, Denville (14)
 Schneider, C. A., 694 Clinton av., Newark (7)
 Schneider, Louis, 874 S. 13th st., Newark (7)
 Schoening, G. A., 148 N. Clinton av., Trenton (11)
 Schrack, Helen F., 726 Cooper st., Camden (4)
 Schramm, Joseph A., 23 Darcy st., Newark (7)
 Schuck, T. E., 58 9th st., Hoboken (9)
 Schulman, A. S., 4632 Boulevard, Union City (9)
 Schulman, Robert, Mendem rd., Morristown (14)
 Schulsinger, S., 136 Fleming av., Newark (7)
 Schulte, H. A., 710 Clinton av., Newark (7)
 Schultz, A. M., 379 Union av., Paterson (16)
 Schureman, J. P., 92 Bayard st., N. Brunswick (12)
 Schwartz, Henry C., Atco, N. J. (4)
 Schwartz, William, 155 Lexington av., Passaic (16)
 Schwarz, Henry J., 5560 Boulevard, N. Hudson (9)
 Schwarz, B. T. D., 2801 Hudson Boulevard, J. C. (9)
 Schwarz, Emanuel, 561 High st., Newark (7)
 Schwarz, W. J. A., 334 7th st., Jersey City (9)
 Scott, Elmer A., 40 E. Front st., Red Bank (13)
 Scott, Fred W., 103 Bayard st., New Brunswick (12)
 Scott, George, 9 S. Penn. av., Atlantic City (1)
 Scott, G. V., 42 Boyd av., Jersey City (9)
 Scott, Karl M., 101 S. Indiana av., Atlantic City (1)
 Scott, Parry M., Beverly (3)
 Scott, Robert H., 205 Roseville av., Newark (7)
 Scott, R. T., Palisade (2)
 Scott, Samuel G., 674 Bergen av., Jersey City (9)
 Scranton, Chas. W., 31 Washington st., E. Or. (7)
 Scribner, Charles H., 84 Ward st., Paterson (16)
 Scudder, F. D., 63 S. Fullerton av., Montclair (7)
 Sealey, H. J., Dumont (2)
 Seely, Roy, 78 N. Clinton st., Trenton (11)
 Segal, Meyer, 814 Kaignn av., Camden (4)
 Seibert, R. S., 359 Hamilton av., Trenton (11)
 Seidler, William F., 21 Ferry st., Newark (7)
 Seidler, V. B., 16 Plymouth st., Montclair (7)
 Seidman, Marcus, 580 High st., Newark (7)
 Seigler, Julius, 644 Bergen av., Jersey City (9)
 Seitzick, Hannah A., 733 Hamilton av., Trenton (11)
 Selinger, Samuel, 413 16th st., W. New York (9)
 Sell, Frederick W., Irving st., Rahway (20)
 Selover, Sarah E., Main st., South River (12)
 Senseman, Theo., 3600 Pac. av., Atlantic City (1)
 Sewall, Millard F., Bridgeton (6)
 Sexsmith, George H., 719 Ave. C, Bayonne (9)
 Seymour, Geo. A., 121 Jefferson av., Elizabeth (20)
 Shack, D. N., 710 Clinton av., Newark (7)
 Shafer, Albert H., 409 Cooper st., Camden (4)
 Shafer, Fred W., 634 Penn. av., Camden (4)
 Shangle, Milt A., 34 Prince st., Elizabeth (20)
 Shannon, James B., 56 Church st., Montclair (7)
 Shapiro, David, 104 Passaic av., Passaic (16)
 Shapiro, Louis G., 375 Broadway, Paterson (16)
 Shapiro, Maurice, 921 Ave. C, Bayonne (9)
 Shapiro, S. A., 735 High st., Newark (7)
 Sharp, Charles E., Port Morris (6)
 Sharp, Jennie S., 726 Cooper st., Camden (4)
 Shaul, F. G., 10 Washington st., Bloomfield (7)
 Shaw, Ernest B., Collingswood av., Collingswood (4)
 Shaw, Joseph B., 119 S. Warren st., Trenton (11)
 Sheets, C. C., Paulsboro (8)
 Shenfeld Isaac, 338 Pac. av., Atlantic City (1)
 Shepard, R. M., 170 Broadway, Paterson (16)
 Sheppard, A. G., Elmer (6)
 Shepperd, Frank R., Millville (6)
 Sherk, A. Lincoln, 2647 Westfield av., Camden (4)
 Sherman, Myron G., Maple av., Morristown (14)
 Sherman, Elbert S., 671 Broad st., Newark (7)
 Sherman, W. E., Geo. & Schureman, N. Bruns. (12)
 Sherron, Clifford M., Salem (17)
 Shick, William F., S. Munn av., East Orange (7)
 Shimer, A. Burton, 606 Pac. av., Atlantic City (1)
 Shimer, Floyd A., Phillipsburg (21)
 Singer, Max, 197 Hillside av., Newark (7)
 Shipman, Frank C., 3663 Boulevard, Jersey City (9)
 Shippe, David N., Midvale (16)
 Shirrefs, R. A., 55 Broad st., Elizabeth (20)
 Shivers, C. H. deT., 121 S. Ill. av., Atlantic City (1)
 Shivers, Chas. H., Sr., 121 S. Ill. av., Atl. City (1)
 Shope, E. P., 956 Newton av., Camden (4)
 Shore, Ernest L., 28 S. Conn. av., Atlantic City (1)
 Shook, B. E., 166 Bergen av., Jersey City (9)
 Shull, J. Virgil, 320 High st., Perth Amboy (12)
 Shulman, Abraham, 379 Main st., Paterson (16)
 Shulman, Nathan L., 527 Fulton st., Union City (9)
 Sica, Samuel, 431 E. State st., Trenton (11)
 Sichel, Harry L., Woodbury (8)
 Sieber, Isaac G., 204 Merchant st., Audubon (4)
 Siegler, Julius, 646 Bergen av., Jersey City (9)
 Silk, Chas I., 189 Rector st., Perth Amboy (12)
 Sill, John B., 1129 Hamilton av., Trenton (11)
 Silver, E. Drew, Hightstown (11)
 Silver, George A., Hightstown (11)
 Silver, H. B., 357 Hawthorne av., Newark (7)
 Silvers, Homer I., 16 N. Suffolk av., Atlantic City (1)

- Silverstein, B. J., 319 Belmont av., Newark (7)
 Simkins, Ray, Bridgeton (6)
 Simmons, A. V., 720 Prospect st., Maplewood (7)
 Simons, Morris L., 174 Washington st., Passaic (16)
 Sinclair, Donald A., Princeton (11)
 *Sinclair, Robert R., 180 Elm st., Westfield (20)
 Sinexon, Henry L., Paulsboro (8)
 Sinkinson, C. D., Jr., 2531 Pac. av., Atlantic City (1)
 Sinton, John Y., Inlaystown (11)
 Sirken, Charles, 887 Summit av., Jersey City (9)
 Sirott, Barnett H., State st., Perth Amboy (12)
 Sista, Charles R., 476 Hamilton av., Trenton (11)
 Sisserson, W. W., 425 Summit av., Westfield (20)
 Siveke, John, 106 Lexington av., Passaic (16)
 Skwirsky, Jos., 130 Watson av., Newark (7)
 Slack, Clarence J., 230 W. State st., Trenton (11)
 Slaff, F., 16 Grove st., Passaic (16)
 Slattery, Mary E., Vineland (6)
 Sloan, Samuel L., 152 Belmont av., Paterson (16)
 Slobodien, Benj. F., Smith st., Perth Amboy (12)
 Slocum, Harry B., Bath av., Long Branch (13)
 Small, E. Laster, Medford (3)
 Smalley, Mahlon C., Gladstone (18)
 Smalley, Sara D., 530 Clifton av., Newark (7)
 Smith, Andrew M., Mt. Holly (3)
 Smith, Arthur L., 62 Bayard, New Brunswick (12)
 Smith, Byron J., 347 16th av., Irvington (7)
 Smith, Charles B., Washington (21)
 Smith, Ellis L., Soho Hospital, Belleville (7)
 Smith, H., 1063 S. Clinton av., Trenton (11)
 Smith, Henry G., Cedar Grove (7)
 Smith, James D., 701 N. 6th st., Camden (4)
 Smith, Joseph J., 325 13th av., Newark (7)
 Smith, J. S., 765 Ave. C, Bayonne (9)
 Smith, J. Vincent, 463 State st., Perth Amboy (12)
 Smith, L. H., 32 Washington st., East Orange (7)
 Smith, Malcolm K., 79 Maple av., Morristown (14)
 Smith, Marcia V., Ocean City (6)
 Smith, Thomas J., Bridgeton (6)
 Smith, W. H., 100 Kings Hwy., W. Haddonfield (4)
 Smith, Warren H., Newton (19)
 Smith, W. Henly, 194 State st., Trenton (11)
 Smith, Wm. R., 42 Westfield av., E. Roselle Pk. (20)
 Snedecor, S. T., Hackensack (2)
 Snyder, J. E. C., 1023 Garden st., Hoboken (9)
 Sobin, Julius, 77 13th av., Newark (7)
 Solomon, David, 18 W. 22d st., Bayonne (9)
 Sommer, G. N. J., 120 W. State st., Trenton (11)
 Souder, Louis R., Victoria av., Ventnor City (1)
 Spano, Frank, 912 Hudson av., Union City (9)
 Spath, George B., 722 Hudson st., Hoboken (9)
 Spaulding, H. J., 512 45th st., Union City (9)
 Spence, H., 123 Fairview av., Jersey City (9)
 Spencer, Alvan, Dover (14)
 Spencer, B. C. (no address) (20)
 Spencer, G. F., 101 S. Ind. av., Atlantic City (1)
 Spencer, Ira T., Main st., Woodbridge (12)
 Spickers, William, 6 Church st., Paterson (16)
 Spiegelglass, Abraham B., Hackensack (2)
 Sprague, E. W., 86 Washington st., Newark (7)
 Sprague, Seth B., 301 York st., Jersey City (9)
 Squeir, Marcus F., 4 Pleasant pl., Arlington (9)
 Staehle, Richard H., 34 Lyons av., Newark (7)
 Staehlin, Edward, 15 Lincoln Park, Newark (7)
 Stage, Jacob S., 601 Clinton av., Newark (7)
 Stahl, Alfred, 55 Lincoln Park, Newark (7)
 Stahl, Charles, 116 Lyons av., Newark (7)
 Stalberg, Samuel, 1109 Pac. av., Atlantic City (1)
 Stalberg, Isaac, 24 S. New Hamp. av., Atl. City (9)
 Stanton, Nath. B., Grant av., Plainfield (20)
 Steadman, E. T., 107 Christopher st., Montclair (9)
 Steffen, Chas. T., Dunellen (12)
 Stein, Emil, 607 Park av., Elizabeth (20)
 Stein, Harry M., 227 W. Broadway, Paterson (16)
 Stein, Jacob M., 68 Columbia ter., Weehawken (9)
 Stein, Martin H., 163 2nd st., Elizabeth (20)
 Steiner, Edwin, 19 Lincoln Park, Newark (7)
 Stellwagon, F. D., 28 Clinton ter., Weehawken (9)
 Stern, Arthur, 224 E. Jersey st., Elizabeth (20)
 Stern, Samuel, 2815 Pacific av., Atlantic City (1)
 Stevens, J. Thompson, 55 Park st., Montclair (7)
 Stevens, Merton H., 3 N. Arlington av., E. Or. (7)
 Stevenson, Geo. S., Hasbrouck Heights (2)
 Stewart, Irving J., Swedesboro (8)
 *Stewart, James M., 294 Broadway, Paterson (16)
 Stewart, Robt. G., 73 Grove St., Montclair (7)
 Stewart, Walter B., 8 N. Tal'h'se av., Atl. City (1)
 Stewart, W. B., Pac. and N. Car. avs., Atl. City (1)
 Stickles, Lloyd C., 49 Parkhurst st., Newark (7)
 Stillwell, Aaron L., Somerville (18)
 Stilwagon, Phillip E., Bridgeport (8)
 Stinson, Richard, 641 E. 18th st., Paterson (16)
 Stockfisch, Robt., 3644 Boulevard, Jersey City (9)
 Stokes, Earl B., 21-23 Prospect st., E. Orange (7)
 Stokes, Joseph, Moorestown (3)
 Stokes, Samuel Emlen, Moorestown (3)
 Stone, A. L., 2838 Berkeley st., Camden (4)
 Stone, Chester T., Ridgewood (2)
 Stone, R. G., State Hospital, Trenton (11)
 Stone, Russell B., Phillipsburg (21)
 Stout, Harry Wilson, Wenonah (8)
 Stout, J. Phillip, 165 Jewett st., Jersey City (9)
 Strahan, F. G., 473 Broadway, Long Branch (13)
 Straub, H. H., 242 Springdale av., E. Orange (7)
 Straughan, C. C., 23 Monmouth st., Red Bank (13)
 Strauss, Arthur, 137 Pavil. av., Long Branch (13)
 Street, D. B., 27 Woodlawn av., Jersey City (9)
 Strickland, George W., 123 1st av., Roselle (20)
 *Strock, Daniel, 326 Cooper st., Camden (4)
 Strom, A., 410 N. 7th st., Plainfield (20)
 Stuart, W. C., 107 Newark av., Hoboken (9)
 Subin, Harry, 1904 Pacific av., Atlantic City (1)
 Suroff, Moses C., 236 Monroe st., Passaic (16)
 Sullivan, Chas. J., 57 Paterson st., N. Bruns. (12)
 Sullivan, George F., 510 Hudson st., Hoboken (9)
 Sullivan, James A., 668 Jer. av., Jersey City (9)
 Sullivan, Margaret N., 2600 Boulevard, Jer. City (9)
 Sullivan, Michael Joseph, Englewood (2)
 Sulouff, Henry S., 5 Corners Bldg., Jersey City (9)
 Summerill, Garnet, 330 Cooper st., Camden (4)
 Summerill, John M., Pennsgrove (17)
 Summers, A. D., Princeton, N. J. (11)
 Summers, William J., Boonton (14)
 Surnamer, Isaac, 345 Broadway, Paterson (16)
 Sutphen, E. Blair, 26 Maple av., Morristown (14)
 Sutton, Fred A., 156 No. Day st., Orange (7)
 Suydam, John L., Church st., Jamesburg (12)
 Swayze, Alvah A., Hackensack (2)
 Sweeney, William J., 151 49th st., Union City (9)
 Swern, Nathan, 302 Mulberry st., Trenton (11)
 Swiney, Merrill A., 325 Ave. C, Bayonne (9)
 Synnott, M. J., 34 S. Fullerton av., Montclair (7)
 Szerlip, L., 31 Lincoln Park, Newark (7)
 Taber, L. R., 170 Broadway, Paterson (16)
 Taggart, Thomas D., 25 S. Indiana av., Atl. City (1)
 Tansey, W. A., 520 Sanford av., Irvington (7)
 Tataryan, H., 422 New York av., Union City (9)
 Taylor, G. Herbert, 590 Ridge av., Maplewood (7)
 Taylor, Harold W., Englewood (2)
 Taylor, Walt A., 450 Rutherford av., Trenton (11)
 Teeter, Charles E., 418 Orange st., Newark (7)
 Teeter, John N., Englewood (2)
 Teimer, Theodore, 17 Hillside av., Newark (7)
 Temes, J. Howard, 2280 Boulevard, Jersey City (9)
 Temple, Arthur H., 164 Jefferson, Passaic (16)
 Ten Eyck, John D., Franklin Park (18)
 Terhune, P. H., 171 Paulson av., Passaic (16)
 Terk, A. P., 381 Palisade av., Union City (9)
 Thayer, Henry W., 28 Dodd st., Bloomfield (7)
 Thomas, George N., Vineland (6)

- Thomas, R. B., 793 Montgomery st., Jersey City (9)
 Thomas, Thomas S., 135 South st., Morristown (14)
 Thompson, A. B., 479 Highland av., Orange (7)
 Thompson, Arthur F., 22 Wash. st., E. Orange (7)
 Thompson, David C., 98 Broad st., Bloomfield (7)
 Thompson, Ray J., 157 E. Gr't av., Roselle Pk. (20)
 Thorne, Nathan, Moorestown (3)
 Thorne, Wm. P., Main st., Butler (16)
 Thornhill, Arthur C., 47 Forest st., Montclair (7)
 Thum, Ernest, 819 Ave. C, Bayonne (9)
 Tidaback, J. D., 52 Beauvoir av., Summit (20)
 Tidwell, H. F., 229 16th st., W. New York (9)
 Tilton, W. S., Asbury Park (13)
 Timlin, James, 64 Beech st., Arlington (9)
 Titman, Russell E., 275 Dodge st., E. Orange (7)
 Toal, Helene G. L., Cedar Grove (7)
 Tobey, F. J., 11 Hazelwood av., Newark (7)
 Todd, Francis H., Auburn st., Paterson (16)
 Tomkins, William, Ridgewood (2)
 Tommassi, Chas. F., 166 Lafayette st., Newark (7)
 Tomlin, H. Hulbert, Wildwood (5)
 Tompkins, Grenelle B., Flemington (10)
 Tooker, Norman B., Princeton (11)
 Torrey, Eugene, 8 N. Prov. av., Atlantic City (1)
 Towbin, Adolph, Lakewood (15)
 Townsend, J. B., Ocean City (5)
 Townsend, M. E., P. O. Box 703, Atlantic City (1)
 Toye, John E., 590 Kearny av., Arlington (7)
 Traub, Paul, 27 Richey pl., Trenton (11)
 Tracy, George T., Beverly (3)
 Traverso, Daniel, Belmar (13)
 Treiber, Benj. A., 626 Perry st., Trenton (11)
 Trippe, C. M., 702 Asbury av., Asbury Park (13)
 Trossback, Herman, Bogota (2)
 Tucker, W. S., 29 E. Kinney st., Newark (7)
 Tuers, George B., 18 Church st., Paterson (16)
 Tunison, Godfrey O., Oxford (21)
 Turner, I. F. P., Broad st., B'k B'dg., Trenton (11)
 Turner, Wm. F., 519 Magie st., Elizabeth (20)
 Tweddel, Geo. K., 12 Church st., Paterson (16)
 *Twinch, Sidney A., 24 Fulton st., Newark (7)
 Twitchell, A. B., 162 S. Orange av., South Orange (7)
 Tymeson, Walt. R., Metropolitan Bldg., Orange (7)
 Tyndall, H. H., 83 Highwood ter., Weehawken (9)
 Tyrrell, Geo. W., 380 State st., Perth Amboy (12)
 Tyson, Francis B., Leonia (2)
- Udinsky, Hyman J., 29 Passaic av., Passaic (16)
 Ulan, Oscar, 174 Fleming av., Newark (7)
 Ulmer, Chester L., Gibbstown (8)
 Ulmer, David H. B., Moorestown (3)
 Underwood, J. Harris, Woodbury (8)
 Updyke, Fannie B., 31 2nd st., Weehawken (9)
 Upham, C. H. E., 399 Westfield av., Elizabeth (20)
 Upham, Helen T., 305 3d av., Asbury Park (13)
 Uptegrove, Edward P., Vernon (19)
 Urbanski, Adrian X., 241 State st., P. Amboy (12)
 Urbanski, Mat. F., 314 Wash. st., Perth Amboy (12)
 Urevitz, A., 495 Clinton av., Union City (?)
 Uzzell, Edw. F., 2703 Pacific av., Atlantic City (1)
- Vaczi, Stephen, 801 S. Broad st., Trenton (11)
 Vail, Herbert B., 301 Washington av., Belleville (7)
 Vail, James Lindley, 24 Holly st., Cranford (20)
 Vail, William Penn, Blairstown (21)
 Vanatta, Geo. W., 224 N. Park st., East Orange (7)
 Van Deusen, Edwin H., Vineland (6)
 Van Dyke, Joseph S., Palisade Park (2)
 Van Dyke, Benjamin S., Cranbury (12)
 Vanderbeek, And'w B., 174 Broadway, Paterson (16)
 Vanderhoff, I. M., 9 Clinton st., Newark (7)
 Van Emburg, G. H., 378 Chest'n't st., Arlington (7)
 Van Erde, A. H., Lafayette av., Hawthorne (16)
 Van Ess, John, 16 Johnson av., Newark (7)
 Van Gaasbeck, Harvey D., Sussex (19)
 Van Horn, A. F., 514 Central av., Plainfield (20)
 Van Mater, John H., 2nd av., Atl. Highlands (13)
 Van Schott, Gerald, Temple pl., Passaic (16)
 Vanneman, Joseph S., Princeton (11)
 Van Ness, H. R., 218 Mt. Prospect av., Newark (7)
 Van Neste, George V., Hopewell (11)
 Van Oehsen, W. H., Bradley Beach (13)
 Van Orden, Thomas D., Ramapo av., Pompton (16)
 Van Ripper, A. Ward, 605 Main st., Passaic (16)
 Van Sciver, John E. L., 106 Broadway, Camden (4)
 Van Urk, F. T., 149 Lexington av., Passaic (16)
 Van Winkle, J. S., 297 Broadway, Paterson (16)
 Vaughan, James M., 825 Kaighn av., Camden (4)
 Veenstra, William, 90 Auburn st., Paterson (16)
 Verbeck, George B., Washburn pl., Caldwell (7)
 *Vigna, Fortunato, 30 Ward st., Paterson (16)
 Vinciguerra, Michael, Elizabeth av., Elizabeth (20)
 Visconti, Jos. A., 808 Garden st., Jersey City (9)
 Vitalie, Dom'n'k V., 646 Palisade av., W. New Y'k (9)
 Vogel, H. A., Eliz. General Hosp., Elizabeth (20)
 von Deeston, H. T., 618 Garden st., Hoboken (9)
 Von Hofe, F. H., 255 Conway C't., E. Orange (7)
 Voorhees, Lamar, Newton (19)
 Voorhees, F. E., 83 Lincoln Park, Newark (7)
 Voorhees, H. C., Bayard st., New Brunswick (12)
 Voorhes, William S., Mendham (14)
 Vosburgh, Fred, 136 Prospect st., Passaic (16)
 Vostrosablin, N. A., Grand st., Jersey City (9)
 Vreeland, H., Ridgewood (9)
 Vreeland, Ralph J., 44 Church st., Paterson (16)
 Vreeland, Wm. N., 62 Madison av., Jersey City (9)
- Wade, S. F., 555 Newark av., Elizabeth (20)
 Wagner, E. C., Fitkin Bldg., Asbury Park (13)
 Wagner, Otto, 1051 Elizabeth av., Elizabeth (20)
 Wainwright, F. P., Bridgeton (6)
 Wainwright, J. M., 256 Montgomery st., Jer. City (9)
 Waite, George N., 569 High st., Newark (7)
 Wakeley, W. E., Meadowbrook, So. Orange (7)
 Wakeley, William A., 120 Main st., Orange (7)
 Wallhauser, H. J. F., 31 Lincoln Park, Newark (7)
 Walker, Harold G., Wyckoff (16)
 Walker, L. M., 1329 Pac. av., Atlantic City (1)
 Walker, R. B., 1st av., Highland Park (12)
 Walsh, Ronald J., 323 Chestnut st., Roselle (20)
 Walsh, Thos. J., 240 S. Broad st., Elizabeth (20)
 Walsh, T. M., Hasbrouck Heights (2)
 Walton, Gordon G., 17 Church st., Paterson (16)
 Walton, R. W., 48 N. Fullerton av., Montclair (7)
 Wantoch, Joseph, Carteret (12)
 Ward, Albert H., 404 Totowa av., Paterson (16)
 Ward, Alfred W., Demarest (2)
 Ward, George Harold, Englewood (2)
 Ward, Gertrude P., Park pl., Bloomfield (7)
 Ward, J. V., 390 Palisade av., Jersey City (9)
 Ward, Leo J., 1053 Elizabeth av., Elizabeth (20)
 Ward, Lettie A., 325 Cooper st., Camden (4)
 Ward, L. Joseph, 115 Jefferson av., Elizabeth (9)
 Ward, Wm. R., 112 Chancellor av., Newark (7)
 Warneke, Frank H., 525 Westfield av., Elizabeth (20)
 Warner, G. VanV., E. Front st., Red Bank (13)
 Warner, W. H. A., 444 Central av., E. Orange (7)
 Warren, Charles B., Bergenfield (2)
 Warren, D. E., 265 Gregory av., Passaic (16)
 Was, F. T. J., 75 E. 16th st., Paterson (16)
 Washburn, Philip G., Greystone Park (14)
 Washington, W. S., 31 Clinton st., Newark (7)
 Wassing, Hans, 282 Broadway, Paterson (16)
 Waters, Edw. G., 123 Jewett av., Jersey City (9)
 Waters, C. H., 126 W. State st., Trenton (11)
 Watkins, Robert E., 517 5th av., Belmar (13)
 Watson, F. S., 811 Stuyvesant av., Trenton (11)
 Watts, Wilbur, 406 E. State st., Trenton (11)
 Way, Clarence W., Sea Island City (5)
 Way, Eugene, Dennisville (5)
 Way, Julius, Cape May Court House (5)
 Webb, Wilson D., Hackensack (2)

- Weber, Francis C., 210 Mt. Prospect, Newark (7)
 Weber, J. F., 264 Main st., South Amboy (12)
 Weber, Walter D., 305 Oak st., Union City (9)
 Webner, C. Fred, 71 Lincoln Park, Newark (7)
 Webster, D. King, Leesburg (6)
 Wechsler, Jos., 3460 Boulevard, Jersey City (9)
 Weeks, David Fairchild, Skillman (18)
 Weigel, Elmer P., 503 Park av., Plainfield (20)
 Weigle, Carl E., 147 Garrison av., Jersey City (9)
 Weiner, Samuel E., 904 Pacific av., Atlantic City (1)
 Weiner, J. R., Bangs av., Asbury Park (13)
 Weinmann, Max H., 714 Scotland rd., Orange (7)
 Weinstock, M. B., 206 Ridgewood av., Newark (7)
 Weisler, Howard, 491 Centre st., Trenton (11)
 Weiss, Abram, 633 Pleasant av., Union City (9)
 Weiss, Lazare, 404 Bergen st., Newark (7)
 Weiss, Louis, 849 S. 11th st., Newark (7)
 Weiss, M. J., 734 Ave. C, Bayonne (9)
 Weiss, Selma, 330 Belmont av., Newark (7)
 Weithaase, Helen E., Vineland (6)
 Wells, William C., Delanco (3)
 Wendel, Aug. V., 205 Littleton av., Newark (7)
 Wendelboe, L. T., 558 S. 10th st., Newark (7)
 West, Edgar L., 443 E. State st., Trenton (11)
 West, Gordon F., 2704 Westfield av., Camden (4)
 Westcoat, A. S., 615 Pacific av., Atlantic City (1)
 *Westcott, William A., Wash. and Jeff., Berlin (4)
 Westcott, William C., Del. & Pac. av., Atl. City (1)
 Westerhoff, Peter D., Midland Park (2)
 Westney, Alfred W., 3005 Pac. av., Atlantic City (1)
 Wetterberg, Louis F., 241 State st., P. Amboy (12)
 Whaland, Berta, Bridgeton (6)
 Whelan, Edw. P., 231 Franklin av., Nutley (7)
 Wheeler, Jas. A., 304 Academy st., Jersey City (9)
 Wherry, Elmer G., 323 Clinton av., Newark (7)
 White, Hugh M., 901 Summit av., Jersey City (9)
 White, R., Franklin (19)
 White, Thomas J., 221 Union st., Jersey City (9)
 Whitman, Loyd B., Bergenfield (2)
 Whitehorne, Henry B., 32 Grove av., Verona (7)
 Whiticar, John H., Ocean City (5)
 Wigg, Cuthbert, Boonton (14)
 Wilbur, Frederick P., Franklin (19)
 Wilbur, William Lane, Hightstown (11)
 Wilbur, Franklin L., 711 Grand av., Asb'y Park (13)
 Wild, Frederick A., Bound Brook (18)
 Wientz, Wm. C., 188 Market st., Perth Amboy (12)
 Wilkinson, B. E., 18 Church st., Paterson (16)
 Wilkinson, George H., Moorestown (3)
 Wilkinson, G., 542 Bergen av., Jersey City (9)
 Willan, E. H., 86 S. Oraton P'kw'y, East Orange (7)
 Willard, Harry S., 44 Church st., Paterson (16)
 Williams, Frank, 260 W. Jersey st., Elizabeth (20)
 Williams, G. W., 217 N. Warren st., Trenton (11)
 Williams, H. D., 527 E. State st., Trenton (11)
 Williams, H., 230 Lexington av., Passaic (16)
 Williams, Louis C., Lambertville (10)
 Williams, Raym'd A., 2 S. Wissahickon av., At.C. (1)
 Williams, W. C., Rutherford (2)
 Williamson, W. L. 22 W. 22nd st., Bayonne (9)
 Willis, Benedict P., Rutherford (2)
 Willis, John, 536 Summit av., Jersey City (9)
 Willner, Irving, 18 Waverly av., Newark (7)
 Willoughby, M. Kemper, Morris Plains (14)
 Wiloughby, William F., Englewood (2)
 Wilson, Charles W., Vineland (6)
 Wilson, Herbert H., Bridgeton (6)
 Wilson, John G., 280 High st., Perth Amboy (12)
 Wilson, Lawrence, Absecon (1)
 Wilson, L. R., 3320 Federal st., Camden (4)
 Wilson, N. L., 410 Westminster, Elizabeth (20)
 Wilson, Robert B., 86 Broad st., Red Bank (13)
 Winn, Samuel L., 1902 Pac. av., Atlantic City (1)
 Winter, Daniel T., Jr., Gifford av., Jersey City (9)
 Winters, Walt M., 288 Broadway, Paterson (16)
 Wintsch, Carl H., 841 S. 12th st., Newark (7)
 Wise, L. D., 119 Morris av., Long Branch (13)
 Wismar, William F., 108 Belmont av., Newark (7)
 Wisnack, Meyer, 318 Broadway, Paterson (16)
 Woelfle, Henry E., 907 Summit av., Jersey City (9)
 Wolf, Frank A., Phillipsburg (21)
 Wolfe, Jacob S., 44 Watsessing av., Bloomfield (7)
 Wolfe, William J., Chatham (14)
 Wolfe, William W., 383 Mulberry st., Newark (7)
 Wolff, Ferd. C., 1109 Garden st., Hoboken (9)
 Wolfs, Jean F., 3 Leslie st., Newark (7)
 Wolowitz, Harry B., Hackensack (2)
 Wood, E. LeRoy, 31 Lincoln Park, Newark (7)
 Wood, Oran A., Paulsboro (8)
 Woodruff, Dare, Vineland (6)
 Woodruff, R. H., Hackettstown (21)
 Woodruff, S. R., 22 W. 22nd st., Bayonne (9)
 Woods, A. Lincoln, Main st., South River (12)
 Woodworth, Lucius J., 283 Franklin st., Bloomf'd (7)
 Woolbert, Roy, Del. & Pac. avs., Atlantic City (1)
 Woolf, Bernard H., 15 Heddon ter., Newark (7)
 Wort, Frederick J., 1080 Broad st., Newark (7)
 Wrensch, Alex. E., 79 Valley rd., Montclair (7)
 Wright, Eliz. T., 28 N. Vermont av., Atl. City (1)
 Wright, Howard E., Princeton (11)
 Wright, Thos. H., 768 High st., Newark (7)
 Wurts, Margaret M., Englewood (2)
 Wyatt, Joseph H., 31 Lincoln Park, Newark (7)
 Wyker, Arthur W., 1 Park pl., Bloomfield (7)
 Wyler, Max, Fort Lee (2)
 Yaeger, L. A., 470 Hamilton av., Trenton (11)
 Yaguda, A., 651 High st., Newark (7)
 Yates, John S., 414 Ellison st., Paterson (16)
 Yazujian, Dikran M., E. State st., Trenton (11)
 Yeaton, William L., 204 11th st., Hoboken (9)
 Yood, Rapheal, 410 Grand st., Roselle (20)
 Young, George J., Memorial Hosp., Morristown (14)
 *Young, Paul T., Monmouth, Gloucester City (4)
 *Young, Peter C., Ringoes (10)
 Young, Warren H., 41 Lincoln st., Little Falls (16)
 Zandt, Frederick B., Hamilton Square (11)
 Zeglio, Peter J., North Plainfield (18)
 Zehnder, Anthony C., 188 Rosevelle av., Newark (7)
 Zeigler, Oscar, Wildwood (5)
 Zenneck, J. F., 38 King av., Weehawken (9)
 Zitani, Alfred M., 501 Grand st., Hoboken (9)
 Zuck, Arthur C., Washington (21)

OFFICIAL TRANSACTIONS

162nd Annual Meeting of the Medical Society of New Jersey

Held at Atlantic City, June 6, 7, 8, 9, 1928

HOUSE OF DELEGATES

Wednesday Morning Session

June 6, 1928

The meeting of the House of Delegates of the Medical Society of New Jersey was called to order in the Vernon Room of Haddon Hall, Atlantic City, New Jersey, at 9:55 a. m., by the President, Dr. Walt P. Conaway, of Atlantic City.

President Conaway: Gentlemen, the meeting of the House of Delegates of the One Hundred and Sixty-Second Annual Session of the Medical Society of New Jersey will please come to order.

Allow me to extend to you a most hearty welcome to Atlantic City. We feel honored that you have again selected this city for your meeting place, and we hope that your short stay with us will be most pleasant and profitable. It is our earnest desire that you will not allow the many and varied attractions of this wonderful resort, the world's playground, to interfere with your attendance or in the slightest degree detract from enjoyment of the scientific treat which our Program Committee has prepared for you.

The report of the Credentials Committee, Dr. Marvel.

Dr. Philip Marvel, Jr.: Mr. President and Gentlemen: Up until this morning, the registration shows 46 Permanent Delegates and 10 Annual Delegates. Doubtless a great many more will register in the course of the day.

President Conaway: Gentlemen, you have heard the report of the Committee on Credentials. What is your pleasure?

Dr. Philip Marvel, Jr.: I move it be adopted.

The motion was seconded, put to a vote and carried.

President Conaway: Reading of the minutes of the 1927 meeting.

Dr. Philip Marvel, Sr.: I move the reading of the minutes of the 1927 meeting be dispensed with, since they were published in the Journal.

The motion was seconded, put to a vote and carried.

President Conaway: Report on Permanent Delegates.

Secretary Morrison: The Report on Permanent Delegates is as follows:

Report on Permanent Delegates

There are 211 names on the roll of Permanent Delegates. I regret to report the death of Dr. William A. Wescott, of Berlin, a Permanent Delegate from Camden County since 1915.

Of the remaining 210, 199 are in good standing and excuses have been received from 10 and forwarded to the Judicial Council for consideration. There has been one resignation.

Vacancies must be declared by this House of Delegates in order to fill the place of Dr. Wm. A. Wescott, of Camden County, and that of Dr. Chas. H. Scribner, a Permanent Delegate from Passaic County, who has resigned.

As this is the year to elect Delegates on quota, who were nominated by their respective county societies at their annual meeting in 1927, we present the following names for election:

Atlantic County, Clarence L. Andrews and Charles B. Kaighn; Camden County, (); Cumberland County, Alfred Cornwell; Essex County, Edgar A. Ill, Anthony C. Zehnder and Leopold Szerlip; Hudson County, William Freile, Henry Klaus and George Ginsberg; Mercer County, Leo Haggerty; Middlesex County, Martin S. Meinzer, George W. Fithian, Howard C. Voorhees and Benjamin Gutmann; Monmouth County, Harvey S. Brown; Passaic County, Orville R. Hagen.

Respectfully submitted,

J. B. Morrison,
Recording Secretary.

President Conaway: Gentlemen, you have heard the report of the Committee on Permanent Delegates. What is your pleasure?

Dr. Quigley: I move the election of the nominees.

President Conaway: If you will please accept the report first. It is necessary under the Constitution for the House of Delegates to declare the vacancies before they can be filled.

Dr. Quigley: I move the report be accepted.

Secretary Morrison: Mr. President, I move that a vacancy be declared in the Camden County and in the Passaic County Society delegations.

The motion was seconded, put to a vote and carried.

Secretary Morrison: Mr. President, I move the election of the nominees to Permanent Delegates as read.

The motion was seconded, put to a vote and carried.

Dr. Cotton: I move the Secretary cast the ballot.

The motion was seconded, put to a vote and carried.

Secretary Morrison: The ballot has been cast, Mr. President.

President Conaway: The Secretary has cast the ballot for Permanent Delegates as read.

Report of the Committee on Arrangements and Program, Dr. M. W. Reddan, Chairman.

Dr. M. W. Reddan: The program speaks for itself, I guess, as far as I can tell you. Practically all of our exhibits space is sold. Our gross income this year will be about \$1800 from the exhibitors and from the ads in the program. This money goes somewhat like this: The ladies' night will cost us \$150; the dance and entertainment on Friday night will cost \$250; the wheel chairs will probably cost \$250; card party, \$100; signs and painting about \$25; setting up the exhibition tables, cards and so on, \$125; entertainment of such guests as may be coming to the Society, about \$75. That will leave about \$350 net for the Society. I notice that is a little improvement over last year. Of course the itemized report will be presented to the Trustees and the Treasurer at the close of the convention, after the whole thing has been taken care of.

Just a little sidelight on some of the duties of the committee. I noticed the Constitutional Revision Committee admitted last night they asked us for 200 mimeographed copies of the proposed amendments; at 8 o'clock this morning, we got the copy; we hope to have it in their hands at 1 o'clock this afternoon.

President Conaway: We knew you could do it. (Applause).

Dr. Reddan: Yesterday we found out we wanted a couple of projectoscopes. There were none in Atlantic City. They will be on duty and set up for the readers of papers requiring the projectoscopes as soon as the men are ready for them.

We have a lot of people to smooth over; we have to pat them on the back and shake hands with them. I want to say we have excellent feeling between the exhibitors and this So-

ciety. We feel that they are men of high type, making their living selling to us the things that we sell to our patients. We try to have a reciprocal relation between them. We are told, and I don't think it is hot air, that they are better treated at our convention than almost any convention they go to. I want you all to go to their exhibits and sign up with every man. It isn't asking much of you; it is giving a great deal of support to your committee and helps to bring the exhibitor back each year and does the Society a great deal of good.

I may say last night the registration was 150, which seems to predict a good attendance for this session.

President Conaway: That is very encouraging. Gentlemen, you have heard the report of the Committee on Arrangements and Program. What is your pleasure?

Dr. Marvel: I move it be accepted.

The motion was seconded, put to a vote and carried.

President Conaway: Report of the Committee on Scientific Work, Dr. Ralph K. Hollinshed.

Dr. Hollinshed read the report of the Committee on Scientific Program:

Report of Committee on Scientific Program.

The officers of the State Society, the Arrangements Committee, and the Committee on Scientific Program have held several meetings during the past year.

At these joint meetings the program which will be presented this year, was formulated.

The committee is very grateful to Dr. Conaway for his very valuable assistance with the program.

Dr. Reik and his office have also been of great help to the committee.

The Symposium on Neurology was worked up by Dr. Wm. H. Hicks, of Newark, and the committee wishes to thank him for his very valuable assistance and hearty coöperation.

The Section on Eye, Ear, Nose and Throat was gotten together by Dr. Linn Emerson, of Orange. The committee wishes to thank Dr. Emerson for the very valuable help he has given toward making the program a success.

The Section on Pediatrics was assigned to the State Pediatric Society.

We wish to thank Drs. Murray, Albee and Levy for the help they have given toward making the program a success.

The Symposium on Physical Therapy was arranged by Dr. S. T. Snedecor. We wish to thank him for the interest and coöperation he has shown.

We believe that this is the largest and most comprehensive program ever presented before this society.

It is hoped that the program will please, and that the experiments we are trying out this year will prove successful.

Ralph K. Hollinshed, Chairman,
W. E. Darnall,
F. J. Kellar.

President Conaway: Gentlemen, you have heard the report of the Committee on Scientific Work, what is your pleasure?

Dr. Quigley: I move it be accepted.

The motion was seconded, put to a vote and carried.

President Conaway: Report of the Committee on Publication, Dr. Charles D. Bennett.

Dr. Bennett read the report of the Committee on Publication:

Report of Committee on Publication

Herewith is submitted the annual report for the full year ending June 1, 1928, supplementing the report published in the May Journal.

Report June 1, 1927, to June 1, 1928

RECEIPTS

Balance on hand May 31,	
1927	\$ 573.61
Advertising (including A.M.A. Rebate \$256.22)	8,119.99
Subscriptions (extra)	48.60
Sale of Journal (extra copies)	43.93
Bills receivable	803.90
Cash on hand June 1, 1928..	588.71
Subscription Account—Society Members	2,468.00
TOTAL	\$12,646.74

EXPENDITURES

Commissions paid (Coöperative)	\$ 678.26
Amount of Commissions O.K.'d local canvasser	188.25
Discounts paid	211.25
Chairman's Salary	500.00
Chairman's Expenses	117.71
Printing and Mailing of Journal O.K.'d	10,103.71
Reprints O.K.'d	91.75
Index	100.00
Total	\$11,990.93

Comparative Statement

	1926-1927	1927-1928
Advertising receipts.....	\$8,041.51	\$ 8,119.99
Subscription (regular)	2,342.00	2,468.00
Subscription (extra)	34.50	48.60
Sales of Journal.....	15.85	43.93
Printing and Mailing Journal	9,382.29	10,103.71
Reprints	115.75	91.75
Commissions	820.66	866.51
Discounts	154.26	211.25

Report June 1, 1927, to June 1, 1928

BILLS RECEIVABLE

Fairchild Brothers & Foster	\$ 41.60
Pomeroy Company	68.00
Belle Mead Sanitarium	12.50
Merck & Company	22.50
Dr. Thomas Prout	22.50
The Bancroft School	6.25
Bright Side Sanitarium	7.50
Dr. Reba Lloyd	135.00
Van Heek Printing Company	33.75
Interpines Sanitarium	6.25
Sunnyrest Sanitarium	60.00
Charles B. Towns Hospital	11.50

Sprague Institute	22.50
Dr. D. E. Drake	12.50
Livezey Surgical Service, Inc.....	22.50
Coöperative Medical Advertising Bureau.	287.42
Clinical Laboratory	16.88
Jefferson Medical School	15.00

TOTAL \$803.90

Report, June 1, 1927, to June 1, 1928

SUMMARY

Amount of advertising secured by Co-operative	\$3,589.40
Amount of advertising secured locally..	4,530.59
Amount of discount and commission allowed Coöperative	813.96
Amount of discount allowed locally to advertisers	75.55
Amount of commission O.K.'d to local canvasser	188.25
Total amount of advertising	8,119.99
Total cash receipts from all sources....	7,480.48
Total amount paid Treasurer	7,473.38

Charles D. Bennett,
Chairman Publication Committee.

Dr. Bennett: Mr. President, there is just another word or two I would like to add. It has nothing, really, to do with this report. The Chairman is more or less constantly in receipt of complaints from members that they do not receive their Journals, especially from newly elected members. A letter came a few days ago saying that a gentleman had been elected several months ago and had not yet received any Journal. I looked him up and found he was put on the County Society list in February, but the notice only came to me in May and it was immediately put upon the list. I have an idea that a great deal of this trouble arises with the local county officers. It is not enough for a member to be elected a member of a component society to be entitled to the privileges and benefits of the State Society. He must pay his dues to the county officer; and that is not enough, the latter must then forward his dues to the state treasurer, and the state treasurer will notify the state secretary, and the state secretary notifies me. That takes some little time.

I am quite aware (it was so in my county) that many of the county treasurers do not immediately send in the dues that they receive from individual members, but hold them back until they get quite a number, to save the trouble of making out several checks, but that procedure delays the benefits of the Society and the Journal to the new member. It seems to me that those dues should be immediately sent in.

There is just one other thing. The Government or the postal authorities have within the last month ordered the Journal printing people to make an entire change in our mailing

list. It was formerly arranged according to railroads; all the towns on one line of railroad, as for instance the Lackawanna above Orange, were put in one sack, but that is all done away with now and towns are listed alphabetically. This change will go into effect with the July issue. There are some 2500 or 2600 names to be changed, and in all probability there will be some slips. Some names will be omitted, some will be duplicated. I simply mention this and ask the membership if they will be charitable to the Committee on Publication for the next month or so until we are sure that this mailing list is right.

President Conaway: Gentlemen, you have heard the report of the Committee on Publication. What is your pleasure?

Dr. Marvel: I move it be received.

The motion was seconded, put to a vote and carried.

President Conaway: The report of the Recording Secretary, Dr. Morrison.

The Recording Secretary, Dr. Morrison, read his report:

Report of the Recording Secretary

Mr. President and members of the House of Delegates;	
We open today the 162nd Convention of the Medical Society of New Jersey. Our total mem- bership, June 9, 1927, was 2363.	
Lost by resignations and transfers..19	
Lost by death	21
	40
Leaving a balance, Jan. 1, 1928, of	2323
Total names on Official List, April	
1, 1928	2325
New and Reinstated members since that date	115
Making a total membership of....	2440
With a gain this year of....	117
New members elected during the year..	153

We have lost by death 21 members. This list includes one of our Fellows, Dr. Daniel Strock, of Camden, who was President of the Medical Society of New Jersey in 1911. He died at the age of 77 years. For many years the dean of the profession in Camden County and vicinity, Dr. Strock's passing leaves a void in the hearts of his friends in the profession and in the laity which it will be difficult to fill. Besides his high attainments in medicine, he was a man of refinement and broad culture, an astronomer, a musician, an artist and a gentleman of the old school whose influence will long be felt in the community he served so devotedly for over 40 years.

I am pleased to report a continuation of the marked improvement in the affairs of the component societies during the past year. There has been a decided increase in membership; the attendance at the meetings shows a very decided improvement; a more marked interest is being manifested in local health matters and in matters pertaining to the welfare of the profession as well

as in scientific work. A few counties deserve special mention.

Bergen County has a model county medical society. The hospitals are being largely utilized as community centers for the profession, clinical meetings and scientific demonstrations of the highest order appear on the programs, and there is a marked activity in medical economics and in public welfare work. The membership roll seems to carry almost every physician in the county and this society is certainly preparing to carry on its part in the new development of the northeastern corner of our state.

Middlesex County Medical Society had a membership of 78 reported in the Official List of 1926. This year the report was 105, an increase in 2 years of over 34.5%. Its meetings are attended by about 40 or 50% of the total enrollment; a deep interest is being taken in local affairs; plans are being instituted to use the hospitals for clinical demonstrations; and the members in this county are showing us that they are determined to uphold the traditions of the profession in that section of the state where the Medical Society of New Jersey had its birth.

Cape May County Society has set an example to the other societies by putting on a program at its last annual meeting devoted entirely to medical economics. Your Recording Secretary has urged the appointment of a live committee in every county to deal with this most important phase of professional interest and every society should devote at least one meeting a year to the study of its problems.

While I have referred to the activities of one county society in the extreme north, one in the extreme south and one in the middle of the state, time will not permit of an analysis of the excellent work being performed in the other societies. It is surely a gratifying response to the advice given and the efforts put forth by the officers of the State Society in their local visitations; and it reflects great credit on the officers and committees in the county societies who are making the plans and carrying out the activities and securing the results. This year I have personally made 23 visits to 19 of the 21 county societies and had my automobile break down on the way to Salem to visit the twentieth. It is very gratifying to note the increased interest in every phase of county society work.

Our President, Dr. Conaway, Dr. Philip Marvel one of the Trustees, Dr. Reik and myself attended the Conference of Secretaries and Editors of the different state societies at Chicago, last November. Real live issues are under discussion at these conferences now and they are becoming very valuable. It may interest you to know that the portion of the program presented by the officers of the Medical Society of New Jersey proved to be the most important and valuable part of the conference. Dr. Reik's able paper on "Free Clinics" brought forth a wide discussion, covering this matter from every angle, and he was highly complimented for his presentation of the subject. Your Recording Secretary outlined the development and the accomplishments of our "Tristate Conference" here in the east. The importance of the study, by members of the profession in neighboring states, of all matters of common interest in the legal and economic aspect of medicine and the desirability of uniform effort and action were outlined and stressed. A similar "Conference" has been established in the New England States and one is being formed in the middle west. We

venture to predict that before very long a dozen of these associations will be formed all over the United States adding very greatly to the importance and to the accomplishments of organized medicine.

May I make just one reference to the work of my own office. If the Treasurers of the component societies were required to have the lists of members with addresses which are sent to me for the Official List, compared with their local telephone books, we might have an absolutely correct roster. This was tried out in my office one year but the difficulty of securing the local telephone directories from all over the state made its repetition useless. This year, in 5 instances, the addresses on my cards were changed to correspond with those forwarded by the County Treasurers only to find, after the lists were published, that errors had been made in each instance. At a very small expense to the county societies the Treasurer could have this done before the lists are submitted to me, and when published they would be found correct.

Respectfully submitted,

J. B. Morrison,
Secretary.

Secretary Morrison: In reference to the remarks that Dr. Bennett made, I would like to say that the complaints sent to him come to my office usually and are forwarded. Some people correspond with the doctor direct, but beside that I have probably 15 or 20 communications from the American Medical Association each year saying that Dr. so-and-so reports he has been elected a member of the county society and wants to know why his name is not on the list, or wants to know why we decline to issue him a fellowship card, or wants to know why we decline to send him an automobile insignia.

The county treasurers make excellent reports up to the time the official list is published. After that, between April first and June fifth, 117 names were sent in. Some of the treasurers report them right away. Others hold them 4, 5, 6, 8 or 10, in some instances 30 days before the names are sent in to Dr. Marsh. In some instances the county officers send me the names of men elected to the county society. I can't put those names on the list; no name can go on the list unless it is referred to me by the treasurer of the State Society with his O. K. on the payment of dues. This is repeated year after year, and every county treasurer should send his names and reports to Dr. Marsh. Then when they come to my office that day or the next day, they are put on the list and immediately sent to the American Medical Association, sent to the Publication Committee, sent to Dr. Pinneo's Insurance Committee and to the U. S. F. & G., so that every person interested in the membership list has a complete, up-to-date list. It can only be done after the county so-

ciety treasurer submits those names to the Treasurer of the State Society.

President Conaway: You have heard the report of the Recording Secretary, Dr. Morrison.

Dr. Marsh: I move it be accepted.

The motion was seconded, put to a vote and carried.

President Conaway: The report will be received.

At this time we would like to have some correspondence read. I have a letter here addressed to the members of the Medical Society of New Jersey; a communication from the Asbury Park Chamber of Commerce inviting the Society to hold its next Annual Meeting at Asbury Park. What is your pleasure, gentlemen?

Dr. Green: I move the communication be received, and be referred to the proper committee.

The motion was seconded, put to a vote and carried.

President Conaway: Dr. Morrison has some correspondence.

Secretary Morrison: Mr. President, I have received the following letter from the American Medical Association. This is a letter sent to the American Medical Association from some people in one of the southern states, I think Kentucky. Prior to the receipt of this letter, I had a communication from the American Medical Association, asking me if I knew of an action taken by the Public Service Corporation in New Jersey, whereby they instructed their men that in every case of accident where an employee of theirs was overcome by gas or asphyxiated by drowning, that man was to be treated by one of their instructed employees, by the Schafer prone method of resuscitation and that no person, not even a doctor, was to be allowed to interfere with that treatment. The treatment was to be kept up until the patient was breathing well, or until rigor mortis had set in.

The Public Service Corporation sent these cards to all of their offices, all of their places of employment and sent them to the hospitals in the state. That was about 2 years ago. Since that time, several other public service corporations have taken up the same thing. They have found, as we have found, that the treatment for resuscitation by pulmotors is a bad thing, and they are carrying out the Schafer prone method, which is probably the most excellent method that anyone can practice, and the profession has accepted it as such. But, here is an instance that has a legal aspect. Shall a doctor, called in to take care of an

emergency case, take the responsibility of that case when he is not allowed to examine the patient? These men will not permit a doctor who sees a patient lying prone on his abdomen, having this treatment carried out, to turn that patient over and listen to his heart, will not allow the doctor to make any examination or draw any conclusion as to that man's condition. Under those circumstances, it seems to me, no doctor should take charge of such a case. More than that, there has been considerable criticism of the physicians. I had better read this communication.

"Your recent letter has been referred to this bureau, asking information concerning the liability of an employer who places a lay employee in charge of an injured fellow employee, with instructions to allow no 'outside interference'. The 'interference' that the lay employee is not to allow includes apparently any examination or treatment of the injured employee by any physician or surgeon that does not meet the approval of the lay employee in charge of the case.

The qualifications of the lay employees who are to be assigned to the treatment of their injured fellow employees are to be determined, according to the scheme submitted with your letter, not by competent physicians and surgeons, but by foremen, district managers, and department heads, none of whom are physicians. The qualifying examination to be given by a foreman and a district manager or a department head has for its purpose merely the determination of the workman's proficiency in the Schafer prone pressure method of artificial resuscitation. The scheme proposed seems to imply that a workman whose proficiency in the Schafer prone pressure method of artificial resuscitation has been attested by his foreman and vouched for by his district manager or department head necessarily knows more about the diagnosis and treatment of injuries of all kinds among his fellow employees than any physician within reach can possibly know and that such a workman is fully competent to determine when the Schafer prone pressure method of artificial resuscitation is called for, and if in his judgment it is called for, to assume full charge of the case, even excluding medical and surgical aid. It implies that no restorative or curative treatment whatsoever can be worth while if in the judgment of the lay workman in charge it interferes with his application of the Schafer prone pressure method of resuscitation. To state the scheme in the manner that I have stated it, is, it seems to me, to show its unsoundness.

In support of the proposed establishment of a system of dominant lay diagnosis and treatment of injuries within his organization, the employer who has submitted the matter to you for consideration says:

"Three cases, cases in the history of a public utility company, bring a question of grave importance to the surface.

.....

'In 2 of these cases occurring within the organization, the patients were beginning to breathe nicely under treatment when a doctor appeared—in one case the company doctor took charge of the case—administered a

hypodermic and in 3 minutes the men were dead. Another case last summer where a little girl was drowned while swimming, 2 of the best men administered prone pressure and the girl started to breathe, when a doctor appeared, gave a hypodermic, and in a few minutes the girl was dead.'

Of course, cases such as those described appeal very strongly to one's sympathy. It is not fair, however, to condemn physicians who treated these cases without knowing what they have to say about them. That the workmen who were endeavoring to maintain the patients' lives should state the cases in a manner most favorable to their view of the situation is natural. But if the patients were progressing so well, what was the occasion for the physicians' administering hypodermic injections? Were the physicians incompetent, and the workmen the only wise men? And even if these two physicians were incompetent, is that any sufficient reason for denying to every injured workman who may be in need of artificial respiration the advantages to be obtained from skilled medical and surgical treatment?

A layman properly instructed with respect to the Schafer prone pressure method of artificial resuscitation is presumably more competent to carry on the mechanical manipulations characteristic of that method than is a physician who has not been so instructed. It does not follow, however, that no physician can by any possibility appear on the scene of an accident who has had much wider experience in the application of that method than has the workman who happens to be on hand. If such a physician appears, what would be the position of the employer and his workman who deny that physician the opportunity to exert his skill toward saving the patient? Neither does it follow that because a workman has been instructed with respect to the Schafer prone pressure method of artificial resuscitation that he is as competent, or even more competent, than is the educated physician and surgeon to determine whether the results of the workman's efforts are beneficial or otherwise, and whether such efforts should or should not be supplemented by other treatment. Certainly, it can hardly be claimed that a workman merely because he has been trained with respect to the Schafer prone pressure method of artificial resuscitation is as competent as is a skilled physician to determine what other treatment there should be, if any is called for, and to apply it.

I am inclined to think that it would be difficult to convince a workmen's compensation board that the lay assistance, coupled with an active denial of medical and surgical assistance, contemplated in the situation stated by you is such medical and surgical aid as a workmen's compensation act ordinarily requires the employer to furnish. In a case for damages in the courts, it would probably be difficult to convince a lay jury that an employer who had actively prevented a physician and surgeon from affording medical and surgical relief to an injured employee had not contributed to that employee's injuries. I can conceive even that a grand jury might be inclined to indict an employer who deliberately denied to an injured workman the benefit of medical and surgical relief, no matter how skilful in the application of the Schafer prone pressure method of artificial respiration the workman might be whom the employer had placed in charge. It might be advisable for an employer who has under consideration

the introduction of any such innovation into his establishment to obtain releases from his workmen and from their families for any consequences that may ensue by reason of the denial to them of medical and surgical aid by the employer.

It seems to me that the wisest course for an employer to pursue under the conditions stated in your letter would be to submit his case frankly to some of the wise men in the county medical society, to obtain their views with respect to the situation. It might be possible in that way to bring to the attention of the local medical profession the dangers inherent in some, if not in all, of the mechanical devices so often called into play by persons who believe that they will restore respiration. If the physicians of the community need to be instructed with respect to the Schafer prone pressure method of artificial resuscitation, arrangements might be made toward that end. If the physicians of the community are to be subordinated in that particular employer's establishment to the domination of the workmen who are trained in the application of the Schafer prone pressure method of artificial resuscitation, the physicians might with advantage know that fact in advance, so as to determine whether they will or will not respond to calls of the establishment. All of these matters can be much more satisfactorily adjusted in friendly conferences before conflict arises than they can after some physician has been called on to treat a seriously injured workman, only to find that a workman is already in charge of the case and that the physician is either dismissed from it or is expected to take his orders from the workman in charge.

I shall be glad to know the outcome of the case."

Secretary Morrison: Some action should be taken upon this matter by this State Society to protect our members who assume charge of a case when they are not allowed to carry on treatment.

President Conway: Gentlemen, what is your pleasure in regard to the communication just read?

Dr. Schaufler: I would move this matter be referred to a committee of 3 appointed by the Chair, including Dr. McBride, for study and further report to the House of Delegates.

The motion was seconded, put to a vote and carried.

President Conway: I will appoint on that committee Drs. McBride, Schaufler and Morrison.

Is there any further correspondence?

Secretary Morrison: I have some correspondence here from the Cattaraugus County Medical Society of New York. In Cattaraugus County, New York, for 6 years there has been a controversy between the public health authorities and the County Medical Society. It seems a Foundation has been doing extensive welfare work in that county, where they were supposed to seek the coöperation of the medical profession, but the competition for patients for this Foundation became so keen that they belittled the work of the physicians

and went over their heads entirely and sought the patients to be treated in order to pad up their own reports. The fight has gone on for some time and finally was brought to the attention of the State Society.

The Cattaraugus County Society presented a report to the State Society, including 8 principles, which they felt the State Society should adopt. I will read these principles in a few moments. These principles were adopted by the State Society of New York, and the Cattaraugus County Society has sent them to me, with the request that we have our State Society endorse them.

Public Health Platform

Eight fundamental principles, formulated by conferences arranged by the State Medical Society, and submitted to the House of Delegates with the recommendation that they be formally approved as a tentative code for all relations between the medical profession and lay health organizations.

(1) The essential part of public health work being preventive medicine, there should be no failure on the part of official and unofficial health and welfare organizations to recognize the importance of the local practicing physician.

(2) All those associated in the conduct of public health activities must recognize fully that preventive medicine is the doctor's rightful field and that laymen must at all times look to the medical man for guidance and leadership therein.

(3) Public health work within a county involves 3 participating factors—lay organizations, official governmental agencies, and the members of the county medical profession.

(4) The evolution of a county health program should be the evolution of medical forces within the county. It is the duty of the local physicians to assume leadership in the organization and management of a county health department.

(5) The function of lay organizations and employees of the county health organizations, acting under the leadership of the practicing physicians of the county, includes assistance in educational work, in helping those who are unable to carry out the doctor's advice, and in providing means whereby the public health program may be carried out.

(6) Lay organizations are needed in the county. Their coöperation is to be welcomed by the physicians. They are needed for the great educational work they can do, for their influence on public opinion, legislation and laws, and in many other ways. But preventive medicine must be controlled and guided by the medical men of the county.

(7) As the function of the county health officer is not to exercise the function of the physicians of the county but to explain the facilities and stimulate the use of these facilities by the citizens, therefore, before any innovations are put into effect by a demonstration or other agency, they should first be thoroughly studied and discussed by the medical society and the professional membership of the county board of health.

(8) All local publicity should be of fact and simply to inform the people of the county of public health work which is being done, why it is being done, and why it should be done.

The eight points of this platform, while framed for the Cattaraugus County Demonstration, are of sufficiently general application to constitute a tentative guide to public health relations in any field. These 8 points were formulated in conference and approved by Homer Folks, an officer of the Milbank Demonstration, and head of its operating organization (the State Charities Aid Association). They were afterward repudiated by the local director of the Demonstration, and tabled by the County Board of Health.

Secretary Morrison: These were submitted to the Medical Society of New York and the Medical Society of New York adopted them.

We have instituted in New Jersey in the last 3 or 4 years a pretty extensive public health educational campaign. Fortunately, we have up to date no foundation which is doing any extensive work, but if some wealthy people in the state should finance such a corporation, we may have a similar condition of affairs. We might better forestall it by adopting these resolutions.

President Conaway: Gentlemen, you have heard the communication. What is your pleasure?

Dr. Marsh: I move this be referred to the Committee on Business for recommendation and action.

The motion was seconded, put to a vote and carried.

Secretary Morrison: Mr. President, I have a communication here from the Medical Review of Reviews, concerning advertisements of cigarets; this was sent to Dr. Carrington.

President Conaway: Gentlemen, you have heard this communication. What is your pleasure?

Dr. Donohoe: I move it be referred to the Business Committee.

The motion was seconded, put to a vote and carried.

President Conaway: Any further communications?

Secretary Morrison: That is all.

President Conaway: Gentlemen, the suggestion is made that this communication from the Asbury Park Chamber of Commerce can not be referred to any committee. It was received at the moment it was read. All you have to do is bear it in mind Friday afternoon when you select your place of meeting for next year. I apologize for the error.

The report of the Executive Secretary, Dr. Reik.

Executive Secretary Reik read his report:

Report of the Editor and Executive Secretary

June 6, 1928.

To the House of Delegates

Medical Society of New Jersey.

Gentlemen:

In our report of June 9, 1927, we reviewed the labors of 2½ years and recommended a course to be followed during the fiscal year now just closing. It is a pleasure to report that the plans outlined a year ago have been successfully developed and to present a detailed accounting of our work, in the hope that it merits your approval.

(1) The Journal. Under authorization given at your last meeting, we have continued to develop the Journal upon the basis already established and have attempted to standardize its form and size. We are now running an average of about 72 pages of reading matter per month. The number of original articles has been increased to a monthly average of 8; this month we are publishing 9; and still the manuscripts awaiting publication increase steadily in number. Whereas we had 3 years ago to seek original matter, we now have more papers offered for publication than we can possibly accept without materially increasing the size of the Journal and, in consequence, the budget of expenditure. Of course this is progress of very gratifying character. In selecting or accepting papers we have constantly borne in mind that this Journal is primarily a medium for presentation of the work of our own members, and, secondly for publication of the work of New Jersey institutions and agencies. The recording of county organizational activities continues to be an important feature, and once again we would express appreciation of the cooperation received from nearly all of the county society reporters.

The special departments previously established have been maintained, and we have added one new section to cover the work of the newly organized Woman's Auxiliary. Through this column we endeavor to sustain a relationship between the auxiliaries themselves and a liaison between the auxiliaries and the medical societies with which they are associated.

Two of our departments have grown into commendable institutions: Medical Ethics, under Dr. John Hammond Bradshaw; and Medical Book Reviews, under direction of Dr. Royce Paddock. To both these gentlemen the Editor is greatly indebted. Paddock is furnishing something more than the usual type of review. Bradshaw's compact discourses have attracted widespread attention and letters have been received from numerous physicians, leaders of the profession in various parts of the country, praising his philosophizing and encouraging our efforts to uphold medical ethics.

One of the most important functions served by the Journal is that of being a medium of communication between the officers and members of the society. We have reason to believe that the Journal is now being read by a larger percentage of members than ever before, and we know that its value to the society is dependent largely on the number of regular readers it can secure. That member who reads his Journal regularly, and promptly upon receipt, will get far more out of his society membership than will the member who neglects this periodic performance.

We do not look upon the Journal as a perfect instrument, and we shall be glad to receive suggestions designed to effect improvement. The

editorial work is becoming a fulltime job in itself and proper development of the Journal calls for more of the editor's time than his multitudinous duties have heretofore permitted.

(2) County Societies. It is a pleasure to report that the component county organizations are in a flourishing condition; possibly a better condition, on the whole, than at any previous time in their history. There are still a few weak spots but at present every one of the 21 county societies is functioning. During the year, we have personally visited every one of these organizations at least once; have attended 2 meetings in 2 counties and 4 meetings in our home county. We are inclined to attribute much of the local activity and prosperity to the close association and deep interest shown by the State Society officers during the past 4 years. Dr. Morrison has been constantly in touch with the county groups and his advice and guidance have been to them invaluable. President Conaway, excelling the praiseworthy example of his predecessors, has during the first 10 months of his presidency visited all of the 21 county societies and addressed each upon the work of the state society. We are confident that these visits have been productive of good results and we earnestly recommend to his successor emulation of his example.

In the course of our own work in the counties we have furthered the antidiphtheria campaign, inaugurated the system devised by the American Red Cross and American Medical Association for medical aid in emergencies—adapting the plan to our state and county organizations—and have practically completed the first stage of organizing women's auxiliaries; active organizations having been constituted in 18 counties, 2 more being scheduled to accept formation during the month of May, and the last remaining county society having promised to consider the question at its next meeting in July. We had hoped to complete this task and report the state 100% organized ere the annual convention in June but delay of a month or so to bring in the final county will not materially detract from our ultimate success. The progress of these auxiliaries has been related from month to month by the Journal but the whole story will be more fully told, and we believe effectively demonstrated, by the women themselves at Atlantic City in June.

In this connection, we would respectfully urge upon members of all county societies the necessity for giving the auxiliaries whole-hearted support. Unless they be accorded encouragement and moral support, we cannot expect them to function with any notable degree of efficiency. Please remember that the women did not thrust themselves upon us; they were invited by the State Society, and later by each county society, to form an auxiliary organization. There is not a single county medical society in this state that cannot benefit materially by proper utilization of this reserve force now at hand. Each auxiliary has great potential possibilities. Let us give active support, and aid them in development and direction of their energies. Above all, please do not sneer at the movement, nor otherwise discourage efforts to develop latent power. Auxiliaries have proved helpful to the profession in other states; they are even now doing well here; they will be fully, or only partially, successful here just in proportion to the amount of cordiality meted out to them by the members of this Society.

The question of periodic health examinations has not been preached so assiduously in the last

as in the two immediately preceding years, partly because our time was fully occupied with other problems, and partly because we deemed it wise to suspend activity in that direction for a short time. As stated editorially in the April Journal, in so far as we can determine, a very small percentage of general practitioners has exhibited any real interest in caring for this kind of practice. It appears that comparatively few of them are prepared or preparing to make complete health examinations. Perhaps time will markedly alter the attitude of the family physician but at present the outlook in that direction is not encouraging. As a result of our observations we were led to make the following suggestion, in the editorial referred to: "Assuming that the vast majority of general practitioners are not going to consider this sort of practice worth their while—whether because of disinclination or because it is too small in amount, for each physician, to justify the additional trouble—and acknowledging that proper health examinations can best be made by individuals or groups of physicians who specialize in such work, may it not be well to induce some of our qualified members in each community, city, large town or county seat, to make a specialty of health examinations?"

Shortly after writing the above, we received from the Publicity Committee of the Morris County Medical Society a letter containing the following paragraph relative to a discussion of periodic health examinations by that eminently progressive society: "There is an increasing demand, on the part of the public, for health examinations. The medical profession is not meeting this demand. As a result, people are having health examinations made by agencies which are not controlled by physicians. These examinations should, if possible, be made by the family physician. If he is not equipped or is not willing to make them he should refer his patients to some physician in his locality who is willing and competent to make them."

Since at least 2 students of the problem in this state have arrived independently at the same solution, we respectfully submit that this is a question worthy of the attention of the State Society and we would suggest that it be referred to a special committee for consideration. We are frequently asked for advice about where to go for a health examination. Naturally, we have been urging every one to call upon his own family physician, but such advice is rather futile if said physician will not accept the application or, worse still, if, as occasionally happens, he ridicules the proposition. Some alternative must, therefore, be devised.

(3) Educational Work. Development of our program for education of the public in regard to medical matters has this year proceeded apace and the results are most heartening. It would be difficult to over-estimate the avidity with which intelligent laymen accept information relating to health conservation. Our previous happy experiences with men's clubs have been more than duplicated this year with women's clubs and school groups.

In addition to our visits to the county medical societies, we found time to personally address 13 lay organizations, whose attendance numbered a total of approximately 2500. Most of the public lecture work this past winter and spring has, however, been performed by the assistant you so kindly supplied.

In accordance with authorization voted at the last session of the House of Delegates, we engaged the services of an assistant to carry on

under our direction. The society was fortunate in securing for this position Mrs. E. C. Taneyhill, a trained and experienced public speaker, whose previous associations had been largely with medical men and institutions, and whose knowledge of educational methods covered a broad field; familiarity with medical ethics and with public health needs constitutes her an ideal liaison officer between the profession and the laity for the purpose of presenting the disease prevention program. Mrs. Taneyhill has submitted a detailed account of her experiences and observations and offered suggestions for further development of our plans; a report so comprehensive that I request that she be permitted personally to present it to this House. For the present it may suffice to say that she has, in a most satisfactory manner, covered speaking engagements with 46 different organizations in 16 different counties; that she has been heartily endorsed everywhere and generally invited to pay a return visit; that she has developed new contacts not heretofore available to us; and that she has introduced a wealth of new ideas for promotion of our general program.

Mrs. Taneyhill's work has been of such high quality and so effective, and her conception of the needs and requirements of this work, and plans for meeting those conditions, are so wise and sound that we strongly recommend placing the entire public educational program in her capable hands. Proper performance of this work embodies a task more than large enough to occupy all the time of one person; indeed we concur in a suggestion of her's, adaptable to a plan of her devising, that opportunities can be found for an unlimited number of volunteers from among the society members, to speak before lay audiences in their own districts or neighboring territory.

Radio broadcasting and newspaper publication of health talks were resumed last winter and carried through successfully from December 2 to April 27, a period of 5 months during which weekly messages were issued. In the beginning our broadcasting was from Station WHAR through the courtesy of Seaside Hotel, Atlantic City, but when that Station terminated its service we were fortunate enough to secure a transfer to the facilities of Municipal Station WPG, Atlantic City. The series was inaugurated by the Editor and followed up by President Conaway, these first 2 speeches explaining the purpose of our state society in offering medical advice to the public in this manner. Then followed, periodically, talks devoted exclusively to the prevention of special diseases or to advocacy of periodic health examinations with a view to prolonging life. In so far as possible we had these manuscripts prepared by members of this society who are recognized as competent to speak authoritatively upon special topics. For instance, Drs. English, Morrow and Pollak dealt with the prevention of tuberculosis; Quinn, with cancer; Lathrop with cardiac affections; McMahon, diabetes; McBride, reconstruction of those injured in industrial accidents; Disbrow with physical examinations. Generalized topics were handled by the Executive Secretary and his associate. Considering it inexpedient to carry on through the summer months we ended this series of talks in the last week of April, the understanding being, however, that we may start a new series in the autumn if you so desire.

To what extent broadcasting accomplishes its purpose one can only guess. That our talks have been heard by a good many people in this

state cannot be doubted; and as for distance, we have received letters from listeners as far South as Brazil, as far West as California, as far North as Buffalo, New York, and as far East as Scotland. There are, however, many peculiarities about radio and it must be admitted that Atlantic City stations seem not to be obtainable by many residents of Northern New Jersey. In consequence of this, even if we continue to avail ourselves of the facilities so generously offered by WPG, we think it would be well to try to get on Station WOR. If any of our members have sufficient influence to secure for the society a regular place on the program of this Newark station they ought to do so. It will not be difficult to provide speakers for both stations and this educational work has great potential value for the public.

It has been our custom to mimeograph these talks and to distribute copies to 150 newspapers throughout the state, bearing a release date that permits publication by the press coincidentally with dissemination of the message through the air. We do not know exactly what percentage of these papers have published the material furnished but we do know that many have done so and that among them are some of the leading papers of the state. We have confirmation of this from many sources. One of the publicity agents of the New Jersey Tuberculosis League told us that publication of our 3 talks concerning the prevention of tuberculosis played an important part in their early diagnosis campaign.

We, therefore, recommend that this combined radio and newspaper publicity program be continued and, if possible, extended next year.

(4) Welfare Committee. The only portion of our work with this committee that has not already been presented to you through the Journal (see particularly the Journals of November, 1927, and March, 1928) has to do with the recent session of the General Assembly of New Jersey, and the annual report of the committee chairman will probably deal with that. We would like to say only that our relationship to that legislative body is now in a healthier condition than for some years past. Gradually, we have built up some degree of understanding so that communications from the state society are now given respectful consideration; we are, when personal contact is necessary, generally treated courteously; and, the influence of this organization in favor of or in opposition to any proposed legislation is possibly greater than ever before. We would like to take advantage of this opportunity to say that it is decidedly helpful to have several members of the medical profession among the Assembly Representatives and Senators. The mere presence of Drs. Newcomb and Woodruff and Baxter in the House this year gave us a feeling of additional security; and Drs. Cole and Carhart in the Senate again proved themselves staunch allies. Particularly does the society owe Senator Blase Cole an expression of thanks for faithful and earnest support of its interests and policies.

In the matter of national legislation affecting the profession, the Executive Secretary has endeavored to aid Dr. Woodward, representative of the American Medical Association at Washington, and has had repeatedly been in communication with the United States Senators and Representatives from New Jersey concerning Bills pending in Congress. It is a pleasure to report that both Senators, and Representatives Bacharach, Fort and Norton have usually responded to our appeals; and it is only fair to say that

Senator Edwards has always shown the greatest interest and been most responsive.

(5) Antidiphtheria Campaign. We have taken an active part in the campaign for abolition of diphtheria from this state and may report that under the chairmanship of Mr. Frank J. Osborne, Health Officer of East Orange, the state committee is making very definite progress. Time has been taken to effect a working organization, with special committees in each county under the leadership of members of this society, and very shortly an active immunization movement will be launched. Even now the preliminary publicity is being released.

(6) Tristate Medical Conference. This particular feature of our work, as reported heretofore, is producing excellent results. In the April Journal you will find a detailed report of proceedings of the last conference, held in New York City February 4, 1928; a report which embraces the clearest exposition we have seen of the problem involved in the matter of medico-legal expert testimony. Time spent in reading that report is well invested; the careful study given to every phase of the question and the suggestions offered as to correction of existing abuses make the report one of exceptional value.

At the most recent conference, held in Philadelphia, June 2, an effort was made to harmonize the relations among the boards controlling medical licensure in these 3 states, a matter of great interest and real importance to all of us. Report of those proceedings will be published shortly in the Journal.

These conferences, 3 per annum, of the representatives of the medical societies of the great states of New York, Pennsylvania and New Jersey, have proved of inestimable value to the medical profession in this large territory; not so much yet in the way of concrete developments as in the nature of a clearing house for opinion; a place where questions of vital import may be thoughtfully considered, where expert advice may be presented to a group of representatives well qualified to receive and digest it, and where possibly such problems may be solved in a manner that will be uniformly satisfactory to the physicians and to the citizens of these large states. We ask you to renew the appropriation to support New Jersey's part in these conferences.

(7) Public Relations. For several years past there has been a growing recognition of the fact that state medical societies must establish and maintain close relations with the public—especially with those "lay" groups, leagues, clinics, foundations and welfare associations that in one way or another concern themselves with public health. We have evidenced our interest in the public health by the educational campaign for instructing the laity in regard to disease prevention; in that respect the New Jersey Medical Society is doing well and expecting to do better. But we must do still more; we must concern ourselves more deeply in the state, and in every county in the state, with the guidance and direction of forces we have ourselves let loose in the community. Do not overlook the fact that for some years we have been preaching that smallpox can be prevented, that typhoid and malaria constitute a disgrace upon any town, that tuberculosis is a preventable disease, that diphtheria can be wiped out, that cancer is curable if diagnosed while in an incipient stage.

What is the public response to all this? Is it not natural for the intelligent citizen to say—

"You possess the knowledge whereby all this may today be accomplished; you have known how to do some of these things for years, some of them for many years, why then do these diseases continue to scourge our state?" It will not suffice to answer that we are ready to eradicate some or all of these diseases when they want us to. They do want us to do so; they are showing that in many ways. They form these leagues to help us in dissemination of life-saving knowledge; they start new clinics for the practical application of what we have taught them theoretically; they offer money to meet the cost of caring for the "submerged half". Sometimes these lay organizations make mistakes—mistakes, which, generally speaking, grow out of overenthusiasm or too great haste in their desire to reach the goal. The important thing for us to consider is that we must be more (not less) closely associated with these welfare movements; that we must accept membership in them when it is offered; that we must help them to direct their energies along the right courses.

Our recommendation is that we must have an established, recognizable central headquarters from which to direct our educational program and to which we may attract all these forces for good, to the end that by harmonious action we can concentrate all the agencies and powers working for the abolition of disease. That, after all, is but expressing the ideal of our profession.

To anyone who looks upon this as Utopian, or who is too conservative to reach beyond the barriers that once encompassed the professional life, let me quote a statement made recently by the President of the Wisconsin Medical Society: "Practice of medicine of the past was more of an individualistic affair, while today the physician has not only his patients to serve, he must consider the welfare of the public. He is a public servant, and he must become more so with the passing of years. Better so than have the state supersede him." The public has not yet threatened to take things medical out of our hands, but it is restless in consequence of the slowness with which disease prevention proceeds. The public offers help; let us meet the situation, let us be real leaders in the good work we so often advocate by resolution.

In his Presidential Address to the New York State Medical Society at its meeting last month, Dr. James E. Sadlier said: "One cannot help being impressed by the steadily increasing development of our medical body and the great number of its activities. In the course of time we may be compelled to seriously consider a centralization of our work and the establishment of a permanent home, such as has been done by our neighboring state of Pennsylvania.

Developments during the past year in the special field of Public Health and Preventive Medicine in this state demonstrate, in no uncertain manner, the fact that physicians, individually and collectively, must assume their responsibilities in all activities that have to do with preventive and curative medicine. The work of disease prevention and disease treatment have become so closely related that it is impossible to separate the two; we cannot leave unoccupied this field of prevention without seriously imperiling the very foundation of our medical profession.

Let us cooperate with and utilize the lay organizations for the service they can render along various lines, such as stimulating and educating the people to seek the physician's services in

both preventive and curative medicine, to provide facilities for the better practice of medicine, and, in such ways as seem desirable, to assist the physician in his many and complex duties. But on the other hand, it is the duty of the medical man to recognize that, by education and professional attainments, he is the one to whom all lay bodies should look for guidance and leadership in all that has to do with the health of the people."

Every word quoted is just as applicable to New Jersey as to New York. In another portion of his address Dr. Sadlier urged that each county medical society provide a special committee on "Public Relations" to deal with such problems as we have been discussing and to act in conjunction with the Public Relations Committee established by the New York State Society last year. Again his recommendation harmonizes with the situation in this state. It happens that we have traveled a considerable distance along that road. Our State Society Welfare Committee is in fact a public relations committee and has functioned in that capacity for a number of years; no change is required here because it will operate as well under one name as another. In the counties, however, conditions are not quite so satisfactory. Some of our component societies have made provision for dealing with public matters; in some counties under the name of "Welfare Committee", in others denominated "Publicity Committee", but, in most counties there is no special group of members designated to meet an emergency. The exact form such a committee shall take, or an exact name for it, is a matter of small consequence. The officers for the time being might even be authorized to act in such capacity. The important point is that some predetermined group shall be authorized to speak for the local body in all matters pertaining to interrelations of public and profession, and to cooperate with the State Welfare Committee through the county representative in that body. Dr. Morrison and the Executive Secretary have been preaching this as an opportunity afforded in the counties but we believe it would be helpful to have the specific endorsement of the House of Delegates.

In closing this report we wish to renew last year's expression of appreciation of the services of Miss Mahoney, our office secretary. The ever increasing amount of correspondence conducted through this office and the extra work entailed in preparation of newspaper material has been a growing burden for her to carry but she has accepted all this so willingly and efficiently as to make it appear as if it were pleasure rather than labor. Her proficiency in general office tasks has been commented upon before but her ability to meet any emergency was demonstrated recently when she was suddenly called upon to substitute for us in broadcasting a health talk from WPG. It was then we discovered existence of an unexpected talent; her voice proved to be admirably adapted to the radio and her diction was perfect. It is a particular pleasure to record this because it assures the society that in the future development of its programs of public instruction it has in Mrs. Taneyhill and Miss Mahoney two very competent aides trained to handle every feature of the publicity work.

Respectfully submitted,

Henry O. Reik, M.D.,
Editor and Executive Secretary.

Executive Secretary Reik: Mr. President, I ask your permission to have Mrs. Taneyhill personally present the report of her own work.

President Conaway: Gentlemen, you have heard this most comprehensive report of our Executive Secretary. What is your pleasure?

Dr. Schauffler: I move the report be accepted and the recommendations concurred in.

Recording Secretary Morrison: Mr. Chairman, before that motion is offered, I would like to amend the motion so as to refer this report to the Business Committee for a study of the recommendations offered.

Dr. Schauffler: I accept that amendment. The motion as amended was seconded, put to a vote and carried.

President Conaway: I would particularly call the attention of the Business Committee to the suggestions in Dr. Reik's report regarding periodic health examinations, the work of his assistant, and the renewal of the appropriation for the Tristate Conference.

We will now hear the report from the Assistant Educational Secretary, Mrs. Taneyhill.

Mrs. Taneyhill read her report as follows:

Report of the Assistant Educational Secretary
June 6, 1928.

The work of the Assistant Educational Secretary has covered, to the date of this report, a period of 8 months. Although the programs of all civic, literary and social organizations for the winter of 1927-1928 had been made out long before her assignment to this field, opportunity has been afforded her during that time to appear before 47 audiences numbering from 6 to 1000, and comprising a total of more than 6700 persons.

The largest of these groups were found naturally in the schools through which we reached 4755 pupils. Next, in order of importance and size, were the Parent-Teacher Associations, Woman's Clubs, auxiliaries to the county society, hospital auxiliaries, various religious organizations (Protestant, Catholic and Jewish), one Business and Professional Women's League, one Kiwanis Club, and one Optimist Club. Three talks have also been contributed to the program broadcast over WPG. In behalf of the Antidiphtheria Campaign Committee of New Jersey, we were given 5 minutes on the program of each of the 3 District Meetings of the Parent-Teacher Association, thus covering the state for this organization with the endorsement of that campaign by the State Medical Society. Especially flattering to our youthful venture was an invitation to address the Annual Meeting of the Morris County Auxiliary at Norristown, Pennsylvania, where we found a flourishing group of 40 women entering the fourth year of their organized activities.

Diphtheria immunization and periodic health examination have been the 2 subjects stressed from various angles in the general educational work, but a definite preference for the latter has been exhibited by our audiences.

With 2 or 3 exceptions, invitations to give these talks have all been secured by members of the county medical society auxiliaries. Especially creditable records were made by Gloucester County, through the efforts of Mrs. Hunter and Mrs. Underwood; by Somerset County, through Mrs. Renner and Mrs. Ely; by Cape May County, through Mrs. Dandois; and Atlantic County, through Mrs. Beckwith. The most intensive day was arranged by Mrs. Dandois who lined up 4 audiences inside of 3 hours, thus reaching a total of 750 persons. Mrs. Renner secured a hearing before 3 rural schools and 1 Parent-Teacher Association in the course of a very satisfactory day. Two record audiences, of 1000 each, were secured through the coöperation of Mrs. James Carmack of the Atlantic City Hospital Auxiliary, who, as a member of the school board, obtained for Mrs. Beckwith permission for us to address the 2000 students of the Atlantic City Senior High School.

What was probably the most important audience in point of far-reaching results was that of the 600 pupils of the State Normal School at Glassboro. In his introduction, Dr. Savitz, the principal, paid a glowing tribute to the medical profession and at the close of our talk he said: "That's a good story. Tell it as often as you can. And next year, don't ask me if you can come back; just let me know when you will be here. The stamp of the State Medical Society is always sufficient guarantee for me."

So, with 3 definite bookings and a number of tentative ones for 1928-1929, it would seem that the educational program of the Medical Society of New Jersey has been accepted as an available source of reliable information in matters pertaining to individual and community well-being. The respect in which the State Society is held is repeatedly evidenced by the welcome accorded your representative in this educational work. Occasionally, also, a follow-up letter of thanks and appreciation is received.

With such a favorable, not to say grateful, attitude on the part of the public toward the proffered guidance of the medical society in general medical matters, it must be evident to anyone who considers the field at hand, that in the record of the past winter we have merely scratched the surface of possibilities. Geographically, New Jersey is an ideally workable state for an enterprise of this kind. Although many of its towns are comparatively small, they are progressively organized into the various groups one finds in the larger cities, and practically each and every one of these forms a potential audience for a subject of such personal and general interest as we have to present. There is a tremendous field in the schools alone, and it could well be our aim to establish the annual talk of the "health lady" (so named by a young school boy) as a regularly accepted feature of their programs.

The only discouraging aspect in the whole experience so far is the more or less indifferent attitude of a number of individual physicians toward this phase of preventive medicine that we are preaching. Such resistance to team work not only goes far to neutralize our efforts but also prevents those very doctors from reaping the benefit of whatever enthusiasm we may have created on the part of the public for enlisting their services. No one can doubt, however, that time will gradually eliminate this single unfavorable factor, for the sound logic of preventive medicine makes a strong appeal to the average individual,

and the result will be a growing insistence on the responsibility of physicians for maintaining the physical efficiency of their patients.

In the long run, then, the returns on the investment in this educational work will depend upon the effort made by the members of the county medical societies and the woman's auxiliaries to secure a hearing. The public is in surprisingly large measure both receptive and responsive.

In planning the work for the future, your attention is called to the fact that, through personal contacts, the members of the county medical societies and the woman's auxiliaries may easily secure entré where any number of appeals from an unknown "educational secretary" would be fruitless. It also places your representative in a much more dignified position to be "invited" to speak to a group than to be granted "permission" for which she has personally applied. As one writer recently said, it is difficult to draw a dividing line between education and propaganda, but that organization will certainly be on the safe side which preserves the subtle distinction between holding itself in readiness to coöperate with a definite educational trend, and applying for a hearing through the personal application of a paid employee.

With this ethical distinction in mind, the following suggestions are offered for promotion of the educational work of the Medical Society of New Jersey:

(1) That the functions of the Publicity or Welfare Committees of the several county societies and woman's auxiliaries be extended to include the securing of appointments with local organizations and schools for presentation of appropriate subjects.

(2) That this feature of the work be included in the regular report of the chairmen of such committees at each meeting of the county societies and auxiliaries.

(3) That each member of these societies and auxiliaries be encouraged to coöperate with the committee to the extent of securing at least one such engagement a year.

By way of suggestion, we are especially desirous of adding the 3 remaining State Normal Schools to our list next year. Also, Bamberger's Auditorium in Newark has seemed to us a very desirable objective. Many other openings of local importance will easily occur to you, and you may have already begun to wonder if one worker can possibly cover such a field. Even if that were possible, it might not be wholly desirable, for after all the physician himself can speak with an authority which no layman, however well informed in a general way, should even try to simulate. If New Jersey has proportionately as many physicians who are interested in the educational side of their professional public work as has Illinois, we could follow the example of that state and inaugurate a Physicians Speakers' Bureau whose members would be available to address audiences in their own locality, or as far afield as they might be willing to go. In order to function properly, such a bureau should be conducted from the office of the Educational Secretary.

A word about the auxiliaries in relation to this educational work. As has been pointed out elsewhere, the medical profession is obviously too occupied with the sick to concern itself about its relation toward the well members of the commun-

ity. Why not officially request the aid of the auxiliaries in this work? Individually, as members of school boards, hospital auxiliaries, woman's clubs, and other organizations, the women of the medical auxiliaries have already demonstrated not only their interest but also their influence and ability in securing openings for our program. To be assured that such activity is acceptable to the county societies and to have such responsibility definitely allocated to them would have an inspirational effect upon the auxiliaries and be a tremendous stimulus to this educational enterprise.

In carrying out such an assignment the auxiliaries might sponsor regular local health talks at a community center—something similar to those held at the Academy of Medicine in New York City, to which the public is invited and where such members of the profession, as Dr. Wendell Phillips, Dr. Morris Fishbein, Dr. William H. Park, and others, have addressed the audiences. Many other ways of identifying the county chapters with local health forwarding movements will develop in the course of time.

In regard to the subjects to be presented, your approval is sought for the development of what might be called a "medical appreciation" program, similar to, though of course on a much smaller scale than, the "musical appreciation" program initiated so successfully last year by Walter Damrosch. The material in the medical field has a more personal and universal appeal than even music can offer, and, if woven into the cultural background of the school room and club, it should have great sticking qualities, thus pre-empting the mental void which is now too often filled by false doctrine. One can, for instance, easily appreciate the dramatic possibilities in the stories of the conquest of small-pox, diphtheria, and yellow fever, illustrated with pictures of Jenner, Pasteur, Klebs, Loeffler, Kitasato, von Behring, and the rest; microscopic slides of causative bacilli; a likeness of Surgeon General Gorgas and several views of the Panama Canal, construction of which was made possible by the heroic work of Walter Reed and his group, culminating in the martyrdom of Lazear. The prevention of rabies in dogs could be pictorially dealt with and sufficient persistence along this line might eventually lead to a more intelligent attitude toward this question in the legislative halls at Trenton. Indeed, the ultimate results of a persistent educational development of this kind can hardly be overestimated. Its initiation by this society might well make New Jersey a pioneer in the systematic dissemination of the history of the painstaking investigation and the sound principles upon which medical science is based.

Such information is, so far as we know, not easily available to the general public which, in its eagerness for relief from apprehension or suffering, quite naturally absorbs all the quack propaganda of which there is such a bountiful supply. The mysterious aloofness which has hitherto characterized the medical profession may still be impressive but it has no pull with this generation which has discarded blind faith for what it strives to make intelligent coöperation. The degree of that intelligence has surely become our responsibility.

Respectfully submitted,

Ethel C. Taneyhill,
Assistant Educational Secretary.

TABLE A
Supplement to the Report of the Assistant Educational Secretary of the Medical Society of New Jersey
Showing Appointments Secured by the Woman's Auxiliaries

Atlantic		
Two Sisters	50	
Woman's Club	50	
Catholic Daughters	80	
Hospital Auxillary	30	
High School	2000	
County Society Auxillary.....	25	2235
Bergen		
County Society Auxillary	8	
P.-T. Association	50	58
Burlington		
County Society Auxillary	27	
P.-T. Association	12	
School	120	159
Camden		
County Society Auxillary	20	
Woman's Club	100	120
Cape May		
County Society Auxillary	27	
Schools	650	
Kiwanis	60	737
Cumberland		
Bridgeton Civic Club.....	50	50
Essex		
County Society Auxillary	75	
*Optimist Club	30	105
Gloucester		
County Society Auxillary	15	
P.-T. Association	20	
W. H. M. Society	30	
Woman's Club	45	
Woman's Club	15	
Normal School	600	725
Hudson		
County Society Auxillary	45	45
Mercer		
County Society Auxillary	12	12
Morris		
County Society Auxillary	6	
School	600	606
Ocean		
County Society Auxillary	12	12
Passaic		
County Society Auxillary	15	15

Salem		
County Society Auxiliary	6	
Woman's Club	25	
	—	31
Somerset		
County Society Auxiliary	6	
Schools	785	
P.-T. Association	75	
	—	866
Sussex		
County Society Auxiliary	21	21
Union		
County Society Auxiliary	15	
Hospital Auxiliary	10	
Woman's Club	30	
	—	55
Warren		
*Business & Prof. Women's League	20	
County Society Auxiliary	7	
	—	27
Norristown (Penna.)		
Auxiliary	40	40
*P.-T.-A. District Meetings . . .		800
		—
		6719

*Secured through members of County Societies.

TABLE B

Supplement to the Report of the Assistant Educational Secretary Showing Organizations Addressed

County Auxiliaries		
Atlantic	25	
Bergen	8	
Camden	20	
Cape May	27	
Burlington	27	
Essex	75	
Gloucester	15	
Hudson	45	
Mercer	12	
Morris	6	
Ocean	12	
Passaic	15	
Salem	6	
Somerset	6	
Sussex	21	
Union	15	
Warren	7	
	—	342
Norristown (Penna.)		40
Cumberland	0	
Hunterdon (not Org.)	0	
Middlesex	0	
Monmouth	0	

Hospital Auxiliaries

Atlantic City	30	
Rahway	10	
	—	40

Schools		
Butler (Morris)	600	
North Wildwood H. S.	250	
Wildwood H. S.	400	
Somerville	500	
Harlingen	125	
Blöwenberg	40	
Skillman	20	
Glassboro Normal	600	
Atlantic City H. S.	2000	
Peapack	100	
Riverton	100	
	—	4755

Parent-Teacher Associations

Palisade (Bergen)	50	
Woodbury (Gloucester)	20	
Northern District (Chatham)	300	
Central District (Plainfield)	300	
Southern District (Glassboro)	200	
Riverton (Burlington)	12	
	—	957

Other Organizations

Business and Professional Women's League (Phil'pb'g)	20	
Woman's Club (Camden)	100	
Kiwanis Club (Cape May)	60	
Woman's Home Missionary Society (Woodbury)	30	
Bridgeton Civic Club	50	
Woman's Club (Woodbury)	45	
Woman's Club (Atlantic City)	50	
Woman's Club (Westville)	15	
Catholic Daughters of America (Atlantic City)	80	
Two Sisters (Jewish) A. C.	50	
Woman's Club (Pennsgrove)	25	
Woman's Club (Rahway)	30	
Optimist Club (Montclair)	30	
	—	585
		6719

President Conaway: Gentlemen, you have heard the report of the Assistant Educational Secretary, Mrs. Taneyhill. What is your pleasure?

Dr. McBride: I move it be accepted.

The motion was seconded, put to a vote and carried.

President Conaway: The next order of business is the report of the Board of Trustees, Dr. Hunter, Secretary.

Dr. Hunter read the report of the Board of Trustees:

Report of Board of Trustees

The meeting of the Board of Trustees was called to order at 8:30 p. m., June 5, 1928, Hotel Haddon Hall, by the Chairman, Dr. Norton L. Wilson.

The following members were recorded as present: Wilson, Hunter, Costill, Sommer, Schaufler, Conaway, McBride, Donohoe, Morrison, Green, Mulford, Pollak, Meecray, Marcy, Eagleton, Marvel, Carrington, Underwood, Reddan, Miller.

Dr. Conaway presented a letter from the Fort Wayne Indemnity Insurance Company regarding

the privilege of advertising in the Journal and exhibiting at the annual meetings.

This question was discussed by Drs. Reddan, Wilson, Morrison, Hunter, Conaway, Mecray, Schaufler and Costill.

Dr. Reddan presented a motion that the action of the Board of Trustees in refusing permission for this insurance company to advertise in the Journal and at the annual meetings be rescinded.

The motion was seconded by Dr. Donohoe.

Upon vote, the motion was defeated by a considerable majority.

Dr. Reddan presented a letter to the Secretary, Dr. Hunter, and the latter read the communication, Dr. Reddan's resignation as a member of the Committee on Program and Arrangements.

Dr. Donohoe moved that the letter be laid upon the table. This motion was seconded by Dr. Conaway and adopted.

Dr. Morrison presented a communication from Dr. Edward H. Egbert, of Cumberland County, which contained an appeal to the State Medical Society from a decision of the Cumberland County Component Society.

After lengthy discussion, participated in by Drs. Mulford, Hunter, McBride, Marvel, Miller and Morrison, a motion, presented by Dr. McBride and duly seconded, that "the Judicial Council be instructed to proceed with an investigation of this matter" was unanimously adopted.

Dr. Hunter announced that the State Board of Education had rendered a decision that osteopaths are not competent for appointment as school medical examiners.

Upon motion of Dr. Donohoe, the Secretary was authorized to appoint 2 additional reporters to take care of the proceedings of the sections on Pediatrics and Ophthalmology, Otology and Rhinology.

Dr. Morrison presented a communication from Dr. Foltz, of Cumberland County, enclosing a bill for \$250 for services rendered by his attorney, Walter H. Bacon, in a recent malpractice suit.

Upon motion duly seconded, it was unanimously decided that request for payment of this bill be denied.

Dr. Hunter presented a communication from the Essex County Medical Society concerning their objections to annual registration of physicians.

It was voted to refer this matter to the House of Delegates.

Dr. Hunter presented a communication from the Essex County Medical Society requesting a ruling upon the policy governing publication in the Journal of communications from members of the State Society.

The Editor requested the privilege of presenting the complete correspondence with the Essex County Medical Society Council concerning this matter.

It was thereupon voted to defer consideration until the next meeting.

Dr. Hunter presented a letter from the Monmouth County Medical Society inviting the State Medical Society to hold its next annual meeting at Asbury Park.

The communication was referred to the House of Delegates.

Dr. Hunter presented a letter from the First National Bank, of Paterson, New Jersey, containing an audit of the possessions of this Society on deposit with that bank.

The letter was referred to the Auditing Committee.

Dr. Morrison presented a letter from the Secretary of the American Medical Association, concerning the ethical character of an advertisement and solicitation of funds by the Physiatric Institute under the direction of Dr. Allen.

This was referred to the Judicial Council.

Dr. Morrison presented a letter from the Secretary of the American Medical Association, concerning the ethical character of certain associations between physicians of this state and the Travelers' Insurance Company.

Referred to the Judicial Council.

Dr. Morrison presented a communication concerning the action of public service corporations in relation to the treatment of injured persons where artificial respiration is required.

Upon motion of Dr. Marvel, this matter was referred to the House of Delegates.

Dr. Wilson announced the following committee to audit the books of the Treasurer: Drs. Mecray, Underwood and Schaufler.

Dr. Marsh stated that he had made the transfer to the Permanent Fund in accordance with instructions given at a previous meeting and requested authority to transfer approximately \$3000 more from his open account to this fund.

His request was authorized by unanimous vote.

Dr. Hunter called attention to a resolution of the Board adopted in 1926 requiring the Judicial Council to keep a record of all its proceedings and to supply copy of such record to the Trustees from time to time, and stated that he had received no such records.

Dr. Conaway announced the receipt of a letter from Dr. Spence saying that he would not be in attendance at this meeting and requesting that he be relieved from duty as a Councillor.

Dr. Marsh asked authorization for the Committee on Revision of Constitution and By-Laws to have their report mimeographed for distribution to the House of Delegates. This authorization was granted.

The meeting then adjourned.

James Hunter, Jr.,
Secretary.

President Conaway: Gentlemen, you have heard the report. What is your pleasure?

Dr. Marcy: I move it be accepted.

The motion was seconded, put to a vote and carried.

President Conaway: The report of the Welfare Committee, Dr. McBride.

Dr. McBride: Mr. President, Members of the House of Delegates: It is a good deal of pleasure for me to be able to present the annual report of the Welfare Committee. It is a very short one. The committee was not called upon to hold many meetings during the past year. We held several, however, and I want to emphasize what the Executive Secretary said a little while ago about the importance of the component societies' activities in supporting the Welfare Committee. Without the active coöperation of the component societies, your Welfare Committee can't accomplish very much, but with their earnest support, almost anything is possible. Of course, this Society or any committee of this

Society is never called upon to support any measure that hasn't merit or that is not worthy of support.

Report of Welfare Committee

The organization meeting of the Welfare Committee of this year was held at Trenton, Sunday, October 9, 1927, and since that date we have held special meetings on January 15 and January 29, 1928; all these meetings being well attended. The minutes of the October session were published in the November Journal, and those of the January sessions appear in full in the Journal of March. In consequence of this publication of detailed reports, it would seem unnecessary to repeat that matter at this time. Furthermore, the report of the Executive Secretary will probably contain references to the committee's work, most of which is conducted through his office.

As a special piece of work, the Welfare Committee gave such cooperation as it could to the Crippled Children's Commission, urging the medical profession to aid the survey as conducted throughout the state, and supporting legislation designed to improve the condition of such unfortunate as might be found.

The sole controversial matter before our committee this year concerned the question referred to us last June by this House—that is, whether we should endorse the proposition of the Board of Medical Examiners to seek enactment of a law requiring annual registration of physicians. When this question came under our consideration a poll of the Welfare Committee, conducted by mail, brought 24 responses (membership of the committee consisting of 36), and of the 24 voting, 16 favored the proposition, 6 were opposed, and 2 desired to withhold opinions until an actual copy of the proposed law could be seen. During the winter an informal referendum was taking place among the county societies, and the result thereof was practically as follows: 16 county societies endorsed the proposition; 1 county, Essex, voted disapproval; 1 other, Middlesex, first approved and later rescinded its action; 3 counties have taken no action.

While a majority of the Welfare Committee was from the beginning favorably inclined toward the Board's proposal, and reports coming from the county societies as they met indicated an overwhelming majority giving it endorsement, we felt that it might be unwise to go before the Legislature without trying, at least, to secure unanimous support of the profession. If any of our component organizations contemplated active opposition we would make a sorry exhibition at Trenton. With a desire to promote harmony and, if possible to present a united front, we held a special meeting at Newark and invited all members of the Essex, Hudson and Middlesex county societies to attend and present their objections to the proposed legislation.

The hoped-for harmony did not eventuate from this gathering. Instead, the vehemence of the opponents was such that we deemed it best to postpone further action at the moment and to await advice from this House of Delegates. We respectfully suggest, therefore, that you again consider this question, provided the State Board of Examiners still wishes to present the Bill, and that you determine authoritatively what action shall be taken. There should be no question about the justness or validity of majority rule, and it should be understood that, whatever the decision of this body may be, every component society shall abide by that decision.

The 1928 session of the General Assembly of New Jersey was the mildest with which we have had to deal in recent years. We sought no special legislation. Support was given to measures designed to facilitate the work and promote the aims of the Commission on Care of Crippled Children, and to the amendment to the law providing for state control of private hospitals and nursing homes. At no time was there any apparent danger of having objectionable bills enacted into law. The record is, briefly, as follows: Assembly 119, for licensing naturopaths, reached the third reading file in the House but did not come to vote. A. 193, designed to confer upon osteopaths greater privileges in the practice of medicine, reached a vote in the House and was defeated by a large majority. A. 207, to establish a board to examine and license cosmetologists, passed the House but was suppressed in the Public Health Committee of the Senate. A. 296, a special privilege bill to license a blind chiropractor, met the same fate; that is, it passed the House but died in the Senate. A. 428, permitting optometrists to use mydriatics, never came out of the committee to which it was originally assigned.

The skill of our Executive Secretary in dealing with legislative problems is well shown in the results obtained. His work this year in developing the public educational program—wherein he has been most ably seconded by the assistant you provided for last June—and in promoting the Antidiphtheria Campaign, the Tuberculosis Early Diagnosis Campaign, and the Tri-state Medical Conferences, is, I believe, heartily approved by every member of the Welfare Committee. His two detailed reports to us since your last meeting have been presented to you through the Journals of November, 1927, and March, 1928, and his complete report for this fiscal year will doubtless be presented today. We commend his recommendations to your favorable consideration.

Respectfully submitted for the Committee.

Andrew F. McBride,
Chairman.

Dr. McBride: During the year the question came up concerning the way hospitals are mulcted out of moneys they are duly entitled to and should receive in accident cases. That was discussed at one of our meetings quite fully and comprehensively and as a result, a subcommittee was appointed to inquire into the matter. Dr. Londrigan was the chairman of that subcommittee and he handed me the report of that committee this morning. It gives you some idea of how extensive that practice is and how the hospitals lose considerable sums of money as a result of not being paid for accident cases. With your permission I will read Dr. Londrigan's report as an appendix to the report of the Welfare Committee.

Dr. Andrew F. McBride,
Chairman of the Welfare Committee.

Your sub-committee, appointed by you to obtain information and data pertaining to the care and treatment of Public Liability Cases in Hospitals, begs to report the results of their investigation.

Thirty-four (34) hospitals have been communicated with and replies have been received from 29.

The average number of patients treated in the hospitals replying to our questionnaire is 740; only 25% of these patients pay for such treatment. The average time such patients remain in the hospital is 12 days. The average loss to the hospital is \$13,000.

All the hospitals which replied to our questionnaire were in favor of the enactment of remedial legislation which would compel either the injured party or the one responsible for the accident to compensate the hospital.

TABLE A

Approximate Loss to Each Hospital in a Year

Alexian Brothers' Hosp., Elizabeth..	\$ 6,000.00
Atlantic City Hospital, Atlantic City..	50,000.00
Bayonne Hospital, Bayonne	6,000.00
Bayonne Hospital & Dispensary, Bayonne	6,000.00
Christ Hospital, Jersey City	2,500.00
Cooper Hospital, Camden	8,466.75
Englewood Hospital, Englewood	5,000.00
Jersey City Hospital, Jersey City	89,460.00
Mercer Hospital, Trenton	2,500.00
Monmouth Memorial Hospital, Long Branch	7,500.00
Muhlenberg Hospital, Plainfield	15,000.00
Nathan & Miriam Barnert Memorial Hospital, Paterson	10,788.00
Newark City Hospital, Newark	27,770.40
Newark Beth Israel Hosp., Newark..	9,000.00
Newark Memorial Hospital, Newark	1,000.00
North Hudson Hospital, Weehawken..	2,707.68
Orange Hospital, Orange	7,000.00
Paterson General Hospital, Paterson	10,000.00
St. Barnabas Hospital, Newark	3,234.00
St. Elizabeth's Hospital, Elizabeth ...	6,672.00
St. Francis Hospital, Trenton	1,000.00
St. Francis Hospital, Jersey City	4,263.00
St. James Hospital, Newark	3,000.00
St. Mary's Hospital, Hoboken	12,590.00
St. Michael's Hospital, Newark	4,000.00
West Jersey Homeopathic Hospital, Camden	25,000.00
Total	\$336,451.83

The above figures are all approximate.

Respectfully submitted,

Joseph F. Londrigan,
Chairman.

I have a list of these 29 hospitals and the total amount of money lost through failure to pay for such patients was \$336,000. That is a stupendous sum, and that doesn't represent all the hospitals by any means. It shows you the magnitude of the matter. I thought it might be well to report it and give you the benefit of the subcommittee's report, so we might discuss the question further, if you will, or offer any suggestions that might appear proper in the premises.

President Conaway: Gentlemen, you have heard the report of the Welfare Committee. What is your pleasure?

Dr. Quigley: Mr. President, I would like to ask the doctor if that was the loss for one year.

Dr. McBride: Yes, one year.

Dr. Londrigan: Just the loss to the hospitals, not the treatment of patients.

President Conaway: What is your pleasure in regard to the report?

Dr. Marcy: I move it be received.

The motion was seconded, put to a vote and carried.

Dr. Newcomb: May I say a few words regarding legislation, at this time, that will come under discussion of the Welfare Committee's report?

I don't mean to criticize the Welfare Committee or the doctors or anyone else in what I am going to say; it is just simply my personal opinion from being on the firing line in the Assembly this last winter.

There were a number of bills introduced, as Dr. McBride told you, which were defeated or kept in committee. The Naturopath Bill had 29 votes promised, and up until 1:40 a. m. on the morning that we adjourned, they were planning to bring that bill up as soon as they had 31 votes. It seems to me that the members of the medical profession of the state of New Jersey aren't taking much interest in legislation. I didn't ask every member of the House of Assembly, but I asked a great many of them if any doctor had spoken to them against the legislation in the Assembly this year, and I haven't found one who had one doctor speak to him. No one spoke to me; Dr. Woodruff says no one spoke to him, outside of Dr. Reik. I mean that the members don't see the members of the Assembly and the Senate. I believe if you don't take more interest and don't see the representatives, that you are going to have some bills put on the statute books that you won't like. They had 29 votes; they only needed 2 more to pass the Naturopath Bill.

The Osteopath Bill was defeated 32 to 12, but the members of the different counties, of Atlantic County, Middlesex County, Bergen County, Mercer County and Passaic County, voted for the Osteopath Bill, to give the osteopaths power or license to give ether and do any major operation and use narcotics. It seems to me that is rather a vicious bill if it is put on the statute books, and, as I see it, there ought to be some personal contact with these members, and the members of the Medical Society aren't doing it.

I had occasion to go to Monmouth County to speak on some health matters, and I took these bills along with me and before we started the meeting on the health question, I took up all of these bills. Well, the next session, the next Monday night, the representative from Monmouth County said, "What the

H— did you say in Redbank about me last week?"

I said, "I didn't say anything but the truth, I hope."

He said, "Well, every doctor in Monmouth County is writing me and calling me up and giving me thunder about the bills." The Optometry Bill was introduced by the Assemblyman from Monmouth County.

If you will read your Journals or the letters that the Welfare Committee send out, and see your Senators and Assemblymen and get them against these bills, it will help.

Only last week I had a postal card from a naturopath, I think he is from Jersey City, saying he hoped I would support the Naturopath Bill next year. So you see it is again on the road. I was speaking with a man who introduced the Osteopath Bill at the last session, this week or last week, and that bill will probably come in. I told him I hoped he would be with us and vote against it this time.

The osteopath sat right at the desk of the Representative or the Assemblyman every session. He didn't miss a session, nor did the naturopath men miss a session. There were several of them there on the floor; we had nobody. Dr. Reik came up on Monday nights, but it seems to me that we must have somebody there all the time to keep after these men. Twenty-nine votes is nearly enough to pass that bill, and there are some new men going into the Senate next year and some of them have always been against the medical profession, were against it in the Assembly and against it this year, and always were against it. We have no reason to suppose they will change when they go to the Senate. I think it is up to the members of the State Society to get busy with their representatives and get them on record whether they favor these chiropractor bills and naturopath bills and osteopath bills and whatever may come up. I am not criticizing anyone, but this is just things as I see them from being on the floor this last winter.

Dr. McBride: That only emphasizes what I said in my report, the importance of the component societies assuming their part of the responsibility. Your Welfare Committee cannot obtain results all the time without the earnest support and coöperation of each component society. That is very important.

I question, however, whether Dr. Newcomb is in possession of all of the facts. Personally, I don't see why any doctor should talk about legislation to any other doctor who is a member of the Society. That would be just a waste of time. I am talking about their individual support now. I think they ought, however, through their local societies, to get

in touch with every member of the Legislature. We did that in Passaic County. If there were any danger signals given through our officers of the Passaic County Society, we got in touch with them immediately. It might not have done any good, but it surely didn't do any harm. I know Dr. Reik repeatedly circularized every member of the Legislature on every single bill. That was done at appropriate times. Personally, I am opposed to lobbying in the Senate chamber, or the Assembly chamber, or in the halls of the State House. I want to go on record as being opposed, personally, to anything of that kind. I personally wouldn't do it and I won't serve on a committee that does, and I want to emphasize that now.

I am perfectly willing to go down to Trenton with a body of physicians any time it is required, collectively, but as an individual doctor I will not do it. It is unethical, as I see it, and I would rather have some vicious legislation passed than to be called upon to do that personally. I haven't any objection to anybody else doing it if they desire to do it, but I don't think we have to do it as a profession. I think it is beneath our dignity, if you will, because I don't like lobbying anyway. I don't think we are ever going to have to do it.

I do, however, thoroughly agree with the matter of seeing to it that your local representatives, whether they are in the Senate or House of Assembly, are seen; that the bills that are introduced or are in contemplation are thoroughly explained, and our position regarding these bills is thoroughly presented, and that these people are most vigorously opposed for reflection if they pass legislation that is inimical to the public health and to the well-being of the people generally; that we as a Society go on record, and openly, if you will, as opposing the return to the legislative halls of such people. I am thoroughly in sympathy with that, but I do not like, nor do I think eventually it will ever do our Society any good, or our profession any good, if we are compelled to individually go into the Senate chamber or the Assembly chamber or into the lobbies of the State Legislature as lobbyists.

I do want to emphasize and reemphasize the importance of the component societies doing their part in supporting legislation that is in the interest of public welfare and public health, and opposing that which is against that interest. I want to simply emphasize that fact.

The Welfare Committee is a large committee, it is a representative committee, it has in its membership a representative from every county society in the state. If that member, or several members from some of the counties,

do their respective part of the work and if we individually and collectively point out those societies that have been weak in support of proper legislation, I think probably we will accomplish more than we will if we go about lobbying in the halls of the Legislature.

President Conaway: The next regular order of business is the report of the Judicial Council. In the absence of Dr. Spence, Chairman, who is detained on account of illness in his family, this report will be presented by Dr. Scammell, a member of the Council.

Dr. Scammell read the report of the Judicial Council:

Report of the Judicial Council

Your Judicial Council desires to present the following report of their activities during the past year.

(1) July 7, 1927: Felauer vs. Dr.

In this case defending physician, after attendance of a few days, referred patient to Mercer Hospital, Trenton, where she was operated on for sarcoma, from which she died about 10 days after leaving the Hospital. Dr.'s diagnosis was pregnancy. The operation was simply exploratory.

Referred to State Society for defense.

(2) October 7, 1927: Herring vs. Dr.

Burn from hot water bag left in bed by a nurse, after a laparotomy for uterine fibroids and chronic appendix.

Council recommended defense by State Society.

(3) December 23, 1927: Janet Ramsey by her next friend, Thos. P. Ramsey vs. Dr.

This was a case of ischemic paralysis following the setting of a fracture of the middle forearm. The case had been previously tried, Dr. getting a verdict against him of \$35,000. It was retried in January, 1928, with a verdict returned against him for \$25,000.

Three physicians, members of the State Society, at the first trial testified that the condition followed too tight bandaging of the arm at the time of setting of the fracture. At the second trial, 2 of these physicians again testified to that fact; all as expert witnesses and against professional statements that such conditions of bandaging did not exist.

The Council referred this case to the State Society for defense.

(4) March 15, 1928: Esenlohr vs. Dr.

A case of death by diphtheria when physician advised removal to hospital and use of antitoxin as soon as he recognized the disease, which was a very short time after initial symptoms.

Recommended defense by State Society.

(5) April 2, 1928: Woody vs. Dr.

"The plaintiff relied on evidence that the defendant physician had admitted that in treating the broken arm, he had made a mistake and that it was his (the doctor's) fault that the plaintiff had such a bad result. Plaintiff relied on this testimony without any medical or expert witnesses to take the case to the jury. On application of the Counsel of the State Society, the trial judge non-suited the plaintiffs, and it is from this ruling that the plaintiffs have appealed."

As this question was one of great importance to the whole profession of the state, your Coun-

cil recommended that the appeal be litigated by the State Society.

(6) April 7, 1928: Marion Grolman vs. Dr.

Case of burn on wrist by the use of medical diathermy in the treatment of a sprain.

Majority of the Board of Councilors recommended best settlement possible by the insurance carrier.

(7) May 1, 1928: Irene Pasterak vs. Dr.

Complainant charged a burn on the face while defendant was performing a surgical operation on the leg. The anesthetic used was ether.

The Board of Councilors recommended defense by the State Society.

We have been consulted on several other matters which have not come before us for formal decision. It is the opinion of the Board of Councilors that all physicians and surgeons, no matter what their line of work, should be insured. Those individuals who have had the defense of a good insurance carrier will certainly testify to the satisfaction they have experienced. It is our opinion that the mere knowledge that a strong insurance carrier is behind a physician is a great deterrent in the matter of strike suits.

Respectfully submitted,

Henry Spence,
John F. Hagerty,
F. G. Scammell,
Marcus W. Newcomb,
H. Garrett Miller.

Dr. Scammell: In conjunction with this report, we also wish to submit to the session that after perusing the reasons for nonattendance as Permanent Delegates, of those from Bergen County and Essex County who haven't been in attendance for 2 years, we have made the recommendation that a new Permanent Delegate be named to take the place of Dr. John E. Pratt who has been an honorary member and is 77 years old and in such condition that he is unable to attend; also, in the case of Dr. Charles F. Baker, from Essex County, we recommend that a new member be named. This doctor is unable to attend and wishes to be relieved from the duties of Permanent Delegate.

For Dr. C. R. O'Crowley we recommend a new delegate, because his excuse is that attendance conflicts with his interest in the American Urological Association, and he is unable to attend.

For Dr. W. S. Washington we recommend that a new delegate be appointed, because he is ill and unable to attend.

President Conaway: Gentlemen, you have heard the report of the Judicial Council. What is your pleasure?

Dr. Londrigan: I move it be received.

The motion was seconded, put to a vote and carried.

President Conaway: At this time, with your permission, gentlemen, the Chair would like to change the regular order of business and call for the report of the Committee on

June 1, 1928.

Indemnity Insurance. I think it would be very appropriate for the report of this committee to follow after that of the Judicial Council, Dr. Beling.

Dr. Beling read the report of the Committee on Medical Defense and Indemnity Insurance:

Report of the Committee on Medical Defense and Indemnity Insurance

The Committee reports that during the past year the services rendered by the United States Fidelity & Guaranty Co., of Baltimore, were satisfactory. Evidence of continued interest and desire to serve were demonstrated by the spontaneous elimination in its entirety of Condition No. 10 of the Policy, which compelled an insured member to give testimony in Court in malpractice suits brought against other members of the Society who were insured under the same Group Policy. This clause in the contract was objected to by certain brokers in New York City, who brought it to the attention of the Commissioner of Insurance of the State of New York. The Medical Society of New York is insured under the same form of contract. The committee had always objected to this provision in the Policy, but it was retained on advice of the attorneys of the State Society, because of the disinclination of the insurance company to delete it from the Policy.

This liberalization of the insurance contract was granted without any increase in the premium rate.

There were 15 cases reported to the company for action during the past year, upon which the cost of investigation has been approximately \$3000. One case was settled without court action. Four cases involving suits for \$1,125,000 are pending. In this connection may be mentioned a verdict of \$37,000 which was returned this year against a member of the Medical Society of New Jersey, who had no insurance protection at all. This case has made a profound impression in the minds of the committee, of the absolute necessity of more adequate professional liability coverage.

It is evident that in all classes of liability coverage, juries are awarding larger sums for injuries or damages sustained by individuals. It, therefore, behooves doctors to be adequately prepared for any exigency that may arise in the course of their practice.

To meet the situation the committee urged upon your broker, Mr. Faulhaber, to obtain from the company higher limits of coverage. He has succeeded in doing this at a very reasonable increase in the premium rate. Now insurance can be had up to a limit of \$50,000 for one claim, and \$150,000 for any number of claims during the premium paying year for the sum of \$35. The increased limits are also applicable to doctors specializing in x-ray and radium treatments at a proportionate increase in premium rate, viz., \$110.

The following is a table of members insured, set forth by counties:

Record of Members Insured, by Counties, under Group Policy PSD-12002

October 10, 1927, to date

Atlantic	33
Bergen	64
Burlington	18
Camden	31
Cape May	10
Cumberland	15
Essex	293
Gloucester	12
Hudson	122
Hunterdon	7
Mercer	15
Middlesex	32
Monmouth	25
Morris	42
Ocean	7
Passaic	91
Salem	6
Somerset	13
Sussex	6
Union	98
Warren	9
Total	949

Apart from this number—949—there are approximately 400 members insured under individual policies at higher cost with the same company.

There must be some reasons for this preference. While the committee has at no time endeavored to ascertain just why this is so, or to influence any member to join the group against his own wishes, it now urgently and earnestly requests the members to give careful consideration to the value of group coverage, of coordinated effort, and wholehearted support in maintaining a high standard of professional service in protecting themselves against the unfounded claims of patients and the fraudulent practices of unscrupulous attorneys. The committee makes the following recommendations:

(1) Renewal of Group Contract with the U. S. Fidelity & Guaranty Co., of Baltimore, for the ensuing year.

(2) Insurance for higher limits of coverage.

(3) Repeal of the present Medical Practice Protective Act of the Society because it is antiquated, puts a premium on a member for his neglect to protect himself properly and lulls him into a false sense of security.

Christopher C. Beling,
Chairman.

President Conway: Gentlemen, you have heard the report of the Committee on Indemnity Insurance. What is your pleasure.

Dr. Pollak: I move it be referred to the Business Committee.

The motion was seconded, put to a vote and carried.

Secretary Morrison: Mr. President, in connection with this report, it might be of interest to you to read this letter. This letter shows the respect the American Medical Association holds for the group indemnity in-

insurance as it is carried in the state of New Jersey.

The Secretary of the Minneapolis Medical Society, being in a quandry as to what form of insurance to seek or what company to deal with, wrote to Dr. Olin West, General Manager of the American Medical Association, for advice, and the latter referred him to us with the statement that the Medical Society of New Jersey has an excellent plan giving good results.

Dr. Quigley: Mr. President, I make a motion that the report of the Special Committee on Revision of Constitution and By-Laws be made a special order of business and be taken up as the first subject on this afternoon's program at 2.30 p. m.

The motion was seconded, put to a vote and carried.

President Conaway: The next regular order of business is the report of the Committee on Finance and Budget, Dr. North.

Dr. North: Mr. Chairman and Gentlemen of the Medical Society of New Jersey: Your committee last year was under the same difficulty as this year. We have a limited amount of money to spend and it seems to be our province this year to endeavor to spend it all. However, we were fortunate last year inasmuch as we received as an income, added revenue which we were not looking for, and some of our committees did not spend all that the budget gave them.

We submit to you this year the following budget:

Budget Estimate for Year Ending June 1, 1929

Publication Committee	\$12,000.00
Welfare Committee	750.00
Educational Secretary	10,000.00
Educational Secretary (assistant)	3,000.00
Educational Secretary (travel)	1,750.00
Educational Secretary (office)	2,000.00
Tristate Conference	100.00
Credentials	400.00
Printing and Stationery	1,500.00
Treasurer (office)	100.00
Recording Secretary	2,250.00
Legal Expenses	1,000.00
A. M. A. Delegates	500.00
Contingent Fund	2,000.00
	<hr/>
	\$37,350.00

You will notice we have eliminated the Health Insurance Committee. It seems to be the consensus of opinion of our committee, which we leave to your approval, that after 3 years we should not any longer have to finance this committee. It would seem to us that the insurance companies themselves should do their own circularizing and not at our expense.

That makes a total of \$37,350. We have a balance of \$2350 from last year. We estimate

we will get \$26,000 from assessments; the Publication Committee will probably give us \$8000; we will get \$700 for interest and miscellaneous, \$300, making \$37,350. So, as usual, we have spent it all before we have it.

I think we can still recommend the usual assessment of \$10 per member, unless you wish to do something more than we have already anticipated. We certainly can't take on the building of a home or anything of that sort unless we increase our assessments. As things stand, I think we will sail through about as usual.

President Conaway: You have heard the report of the Committee on Finance and Budget. What is your pleasure?

Dr. Marcy: I move it be accepted.

The motion was seconded, put to a vote and carried.

President Conaway: The report of the Treasurer.

Dr. Marsh, the Treasurer, presented his report:

Annual Report of the Treasurer, 1928

CAPITAL ACCOUNT

DR.	
May 31, 1927—	
1 M Chicago & Alton 3½% Bond	\$786.50
2 M 1st Liberty Loan 3½% Bond	2000.00
5 M 4th Liberty Loan 4¼% Bond	4975.63
May 31, 1928—	
Gain on disposal, 4th Liberty Loan Bonds	48.62
	<hr/>
	\$7810.75

CR.

May 31, 1928—	
Transferred to PERMANENT FUND	
2 M 1st Liberty Loan 3½% Bonds	\$2000.00
4 M 4th Liberty Loan 4¼% Bonds	4000.00
Transferred to General Account	
Proceeds of sale 1 M 4th L. L. Bond	1024.25
1 M Chicago & Alton Bond	786.50
Balance	0.00
	<hr/>
	\$7810.75

Account Closed

GENERAL ACCOUNT

RECEIPTS

Balance, June 1, 1927	\$16,064.93
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Assessments—

Atlantic	\$1260
Bergen	1470
Burlington	480
Camden	1160
Cape May	220
Cumberland	490
Essex	6730
Gloucester	370
Hudson	3990
Hunterdon	230
Mercer	1370
Middlesex	1090
Monmouth	935
Morris	790

Ocean	160
Passaic	1880
Salem	200
Somerset	370
Sussex	160
Union	1880
Warren	280
	<hr/>
	25,515.00

Publication Committee	7,464.38
Program Committee	270.50
Health Examination Charts sold	39.80
Interest	744.40
Transferred from "Capital Account"	1,810.75
	<hr/>
	\$51,909.76

EXPENSES

For Publication Committee	\$11,210.40
" Welfare Committee	715.44
" Credentials Committee	309.12
" Health Insurance Committee ..	422.25
" Finance & Budget Committee ..	3.00
" Board of Trustees	13.70
" Executive Secretary's Dep't:	
Salaries	12,250.00
Travel	1,566.11
Office	1,805.96
" Recording Secretary's Dep't:	
Salary	950.00
Office	1,281.55
" Treasurer's Office: Expenses...	53.60
" Tristate Conference	90.75
" Printing and Stationery	893.86
" Legal Expenses	1,517.42
" Annuity	250.00
Balance, May 31, 1928:	
Bank Deposits	\$17,790.10
C. & A. Bond	786.50
	<hr/>
	18,576.60
	<hr/>
	\$51,909.76

BUDGET BALANCE

Expected Income (estimate, June, 1927)	\$33,100.00
Actual Income (current)	34,034.08
Budget Appropriations	38,100.00
Actual Expenditures	33,333.16
Income Excess	934.08
Credit Balance	4,766.84
	<hr/>
Budget Surplus	\$5,700.92
Actual net Income	34,034.08
Expenditures	33,333.16
	<hr/>
Net Surplus	\$ 700.92
	<hr/>
Net Surplus	\$ 700.92

Respectfully submitted,

E. J. Marsh,
Treasurer.

May 31, 1928

President Conaway: You have heard the report of the Treasurer. What is your pleasure?

Dr. Quigley: I move the report be received.

The motion was seconded, put to a vote and carried.

President Conaway: An Auditing Committee was provided for by the Trustees last night.

The report of the State Board of Examiners, Dr. Kelley.

Dr. Kelley: Mr. President and Gentlemen: Some time ago I heard a story about a speech of a fellow who in the lure of the moment, under the influence of the moon, proposed to a girl. You know the Swedes are said to be very taciturn, but he proposed to her and then she immediately accepted him. Then they fell into a silence which was broken after a considerable length of time by the girl saying, "Ole, why don't you say something?" He said, "Well, Lena, I think maybe I have said too much already."

The Board of Medical Examiners last year presented a lengthy report and this year they are going to present a very short one.

Dr. Kelley read the report of the State Board of Medical Examiners:

Report of the State Board of Medical Examiners

Since the last annual report of the Board, several interval reports have appeared in the Journal. The Board has been active in many ways, of which the following is a brief résumé:

Licenses. There have been issued 193 licenses to Doctors of Medicine; of this number 46 were by examination and 147 by endorsement from other states or the National Board of Examiners. Twenty-eight licenses have been issued to Osteopathic Physicians; 21 by examination and 7 by endorsement. Three licenses have been issued to Chiropractors under the exemptions in the law; 2 of these were by examination and 1 was issued without examination under the clause requiring the Board to issue a license to a Spanish American War Veteran.

Nineteen Doctors of Medicine and 6 Doctors of Osteopathy have been endorsed out of the state.

We have no way of knowing how many licensees have died.

Revocation of Licenses. One physician and 4 midwives have had licenses revoked. There are 2 cases of physicians listed for a hearing before the Board on charges that may result in revocation of the licenses. No revoked licenses have been restored.

Court Decisions. A recent issue of the Journal carried the full details of 2 decisions of the New Jersey Supreme Court which went far in establishing the medical practice act. Their importance is such that we ask permission to repeat them.

In the first case, the Supreme Court reversed the lower Court and ruled that osteopathy does not include electrotherapy. The second decision was a reversal of the lower Court, and the Supreme Court ruled that in using electricity the chiropractor exceeded his authority under the statute. The first decision also contained an opinion that was ambiguous as to whether or not the use of the title "Doctor" constituted the practice of medicine. This decision has been sent to the Attorney General for a further opinion from him.

Prosecutions. Numerous complaints have been received and every one has been given attention. A total number of cases investigated up to June, 1928, has been 181; 79 of these have been listed in the Courts with the following results:

Prosecutions—June 1, 1927, to June 1, 1928

Court Cases—

Won and settled	42
Won, appeal by defendant to Supreme Court taken	1
Won, appealed by defendant to Supreme Court, conviction sustained and appeal by defendant to Court of Errors taken	3
Won, appeal by defendant to Supreme Court lost, no further appeal taken	1
Lost, appeal to Supreme Court taken by Board, trial court reversed, appeal to Court of Errors taken by defendant	2
Lost, no appeals taken	5
Listed in Courts for trial	25
	— 79

The greatest handicap in the prosecution of violators has been the lack of personnel and insufficient recompense to those doing the work. It has been impossible to obtain male investigators because the Board has not been able to properly finance them. The Board members individually can do no more than supervise the work of prosecutions. It necessarily must be done by employees and we feel that the Board and the profession have been signally successful in this phase of the work. It was with the hope of doing even better work, that the idea of annual registration of licenses was proposed.

Annual Registration. The House of the Delegates of this Society went on record last June as favoring the idea of annual registration. The proposal met with favor in 16 counties during the past winter. Middlesex County at first endorsed the proposition, but later opposed it. Essex County strenuously voiced an unalterable opposition. The situation at the present time is briefly this:

New Jersey has excellent laws regulating the various branches of the healing arts. No law, however, is stronger than the power to enforce it. The duty of enforcing it has been put upon the Medical Board. The Board in turn has done its utmost to protect the legitimate licentiates. It would like to do more to protect the profession and to protect the public. It believes that it has pointed out a way by which this can be done. If a majority of the profession do not want to be annually registered, our duty is ended. It seems only reasonable, however, to ask the critics to show a better way. Eventually New Jersey will, we believe, fall into step with the progressive states that have adopted this measure of protection to our profession.

Personnel of the Board. The membership of the Board has not changed in the last 2 years. This year, however, the Board is very likely to lose the services of one who has been a member for 30 years, representing the Homeopathic Society. Dr. Charles A. Groves states that he will not accept reappointment, due to his advancing years and ill health. The remaining members of the Board desire at this time to pay him a small tribute. His services have been invaluable and his counsel has been much appreciated by the younger members. We will all cherish in our memories very pleasant associations with a most gracious gentleman.

Respectfully submitted,

Charles B. Kelley,
Secretary.

President Conaway: Gentlemen, you have heard the report of the State Board of Medical Examiners. What is your pleasure?

Dr. McBride: I move it be received.

The motion was seconded, put to a vote and carried.

President Conaway: Report of the Committee on Public Hygiene and Sanitation, Dr. Gordon K. Dickinson. Dr. Dickinson is absent. Is any other member of that committee here? (No response.)

Report of the Committee on Standardization of Hospitals, Dr. John McCoy. Dr. McCoy is absent. Is there any other member of that committee here? (No response.)

Gentlemen, before we adjourn, I wish to say we have only 2 or 3 more committee reports to be made. There will be a meeting of the Board of Trustees, immediately at the close of this session, in Room A.

I would like to ask you to spend some time with the exhibitors on the floor below. Special credit is due our Committee on Program and Arrangements, especially Dr. Reddan and Dr. Olmstead, for the unusual array of exhibits we have this year.

I think it would be well if we adjourn now until 2:30 p. m.

It was regularly moved, seconded and carried that the meeting adjourn until 2:30. The meeting adjourned at 12:30 p. m.

Wednesday Afternoon Session

June 6, 1928

The meeting was called to order by President Conaway at 2:50 p. m.

President Conaway: Gentlemen, we will now proceed with the special order of business listed for this session. We are unavoidably 20 minutes late, nobody having been present at 2:30.

The report of the Special Committee on the Constitution and By-Laws. Dr. Quigley.

Dr. Quigley: Mr. President, Members of the House of Delegates: In the absence of the Chairman of the committee, Dr. B. Van D. Hedges, I am making this report for the Committee on Revision of the Constitution and By-Laws. We offer this draft as an amendment to the Constitution of this Society. We offer it as an entire amendment of the Constitution.

As you probably know, any amendment to the Constitution would have to be read at this meeting and lay over a year and come up at the next meeting of the Society for final adoption. It will be necessary, however, to decide now as to the structure of these various

articles because next year, except for some slight changes, which will not nullify the intent of the amendments as presented, no further amendments can be made unless we want to have the draft laid over for another year. So, it is important that we decide today, with the exception of possibly some rephrasing or punctuation, as to the various articles.

On these copies which you have in your hands, I will ask you to look at Article IV, Section 3, which reads, "Each Component Society shall be entitled to seat one Delegate for each ten." Change that to fifteen, so it will read "fifteen members or major fraction thereof". Place a comma after "thereof", and strike out the next line in its entirety and the next line, with the exception of the word "or" and the next line, the words "major fraction thereof".

The sixth line from the bottom of the page, where it says, "the Delegates to the Medical Society of New Jersey," strike out the words "to the Medical Society of New Jersey".

Mr. President, I believe the easiest way of going at this would be to take up article by article the proposed revision, and if there is no objection, I shall start with Article I.

Article I. Name and Title.

"The name and title of this organization shall be The Medical Society of New Jersey."

I move its adoption.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article II. Purpose of this Society.

"The purpose of this Society shall be to federate and organize the profession of the state of New Jersey, to unite with similar organizations of other states to compose the American Medical Association, to advance medical science and elevate professional standards, to safeguard the material interests of the profession and promote friendly relations among its members, to educate the public in preventive medicine and hygiene, and in all to make the medical profession most capable of rendering service to humanity."

I move the adoption of Article II, Mr. President.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article III, Component Societies.

"The County Medical Societies which hold Charters from this Society shall be known and referred to in the Constitution and By-Laws by the title of Component Societies."

I move the adoption of Article III.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article IV is rather long and I shall move the adoption of sections, rather than the article in its entirety.

Article IV. Composition of the Society.

Section 1. "This Society shall be composed of the Fellows, the Officers, and the Delegates."

I move the adoption of Section 1.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Section 2 (a). "The Fellows shall consist of the ex-Presidents of the Society."

I move its adoption.

The motion was seconded, put to a vote and carried.

Dr. Quigley: (b). "The Officers shall be a President, three Vice-Presidents, Secretary, Treasurer, members of the Board of Trustees, and Councilors."

I move its adoption.

The motion was seconded, put to a vote and carried.

Dr. Quigley: (c). "Delegates shall be chosen by and from the Component Societies, and shall be members of this Society and the House of Delegates for the period for which they are elected, subject to their continuing in good standing in their respective Component Societies and their respective Component Societies continuing in good standing in this Society."

I move its adoption.

The motion was seconded.

Dr. Pollak: Mr. President, will you pardon me for asking of Dr. Quigley an explanation. The second section went by so fast I didn't comprehend it. He speaks of the officers as the President, three Vice-Presidents, Secretary, and Treasurer. I would infer there would be but one Secretary.

Dr. Quigley: I might explain that the feeling has been that the division of the secretarial work was not good. Dr. Carrington felt this way and so the Committee on Revision has stricken out the words "Recording" and also "Corresponding". So that in this revision there is just one Secretary of the Society.

The motion to adopt sub-section (c) of Section 2, Article IV, was put to a vote and carried.

Dr. Quigley: I move the adoption of the entire Section 2.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Section 3 (a). "Each Component Society shall be entitled to seat one delegate for each fifteen members or major fraction thereof, to be elected at their respective annual meetings by a majority vote by individual

ballot of the members present; but each Component Society shall be entitled to no less than three delegates. At the annual meeting of the Component Societies, following the adoption of this Constitution, the delegates shall be elected in three groups, one group for a period of one year, one group for a period of two years, and one group for a period of three years, and thereafter one-third of the delegates be elected for a period of three years."

Secretary Morrison: Thereafter one-third of the delegation shall be elected.

Dr. Quigley: That is cut out because that doesn't make sense. You don't have to have that.

Dr. Stahl: The third would be a bad affair, because if there were odd numbers, you couldn't very well make them even thirds.

Dr. Quigley: May I ask you in the third from the last line, after the words "three years" to cross out the word "and" and also the word "that" and also at the end of the line the word "one" and the succeeding line strike out "third of the delegation be elected every year".

I will read that: "At the annual meeting of the Component Societies following the adoption of this Constitution, the Delegates shall be elected in three groups, one group for a period of one year, one group for a period of two years, and one group for a period of three years, and thereafter delegates shall be elected for a period of three years."

I move its adoption.

The motion was seconded.

Dr. Marvel: Mr. President, the paper I had handed to me reads very differently from the presentation that Dr. Quigley has made.

President Conaway: Were you here when he started to read?

Dr. Marvel: This has just been handed me a few minutes ago. I noticed in the reading it was different. I wonder whether others have the same copy I have.

President Conaway: Dr. Quigley suggested some changes.

Dr. Quigley: I asked to have certain lines crossed out, and I guess you weren't here at the time, doctor.

Dr. Wilson: I understand you said fifteen members and it is ten here.

President Conaway: It is changed from ten to fifteen and no limit.

Secretary Morrison: Mr. President, I don't think that provides for a continuity. You elect one-third of the delegates one year; the second year you will elect another third for two years, and the third year, another third. At the end of the first year that delegation ceases.

Dr. Quigley: As the terms run out, they will be elected for terms of three years.

Secretary Morrison: That should be so stated.

Dr. Pollak: As it reads, it will mean there will be three groups elected in the first year; one group for one year, and they will appear the following year for a three-year term.

President Conaway: It is clear the way he read it.

Secretary Morrison: Will you give me the wording after the word "thereafter"?

Dr. Quigley: "Thereafter delegates shall be elected for a period of three years."

Dr. Stahl: I move that be changed to term.

Dr. Quigley: I might say the words "period" and "term" are absolutely synonymous according to the dictionary.

The motion to adopt Section 3 of Article IV was put to a vote and carried.

Dr. Quigley: "In the event of the subdivision of any of the existing Counties and the creation of a Component Society in a new County, then the Delegates of the Component Societies existing in the old and the new County shall be apportioned as above set forth and the quota of the original Component Society shall be diminished correspondingly.

Each Delegate elected by the Component Society shall present a certificate signed by the President and the Secretary of his Component Society in the following form:

.....N. J.,.....19....
This is to certify that.....M.D.,
was elected a Delegate of the Medical Society of New Jersey on the day of 19...., by the Component Society of according to the requirements of the Charter, Constitution and By-Laws of the Medical Society of New Jersey."

I move the adoption of Section 3 in its entirety.

Dr. Guion: Shouldn't that state what period of time they were elected for?

Dr. Quigley: It says, "according to the requirements of the Charter, Constitution and By-Laws". The Constitution requires a three-year term.

Dr. Guion: Some for one, some for two, and some for three.

Dr. Quigley: That is covered in your first section.

Dr. English: In your first election, you send the cards in, but how is the central office going to tell which delegates are elected for one year, which for two years and which for three years?

Dr. Quigley: I don't think that is of any great consequence, because it is up to the

county societies to decide that anyway. They will send to the Secretary, in fact they are required to send to the Secretary of the State Society, a list of those elected, and when they make up the initial list, they will certainly send in a list of those elected for a one-year term, those for a two-year term and those for a three-year term.

The motion to adopt Section 3 in its entirety was seconded, put to a vote and carried.

Dr. Quigley: (a) "In the event that a Component Society becomes delinquent to this Society, then the entire delegation of such Component Society shall lose its status during the period of such delinquency."

I move the adoption of subsection "a".

The motion was seconded, put to a vote and carried.

Dr. Quigley: (b) "A vacancy shall exist in the delegation of a Component Society when a Delegate ceases to be in good standing in his Component Society, resigns, or dies.

In the event that a vacancy shall occur in the delegation of any Component Society, the Secretary of such Component Society shall notify in writing the Secretary of this Society of such vacancy", (and I might just say here you should make the following changes: after the comma after the word "vacancy" strike out the word "upon" and place the words "and after"; also, on the same line, strike out the word "there", and on the next line, at the beginning, "upon", so it will read as I shall read it) "and after acknowledgment of such notice, the Component Society, at a regular or special meeting, shall fill such vacancy for the unexpired term by a majority vote by individual ballot of the members present."

I move the adoption of subsection "b".

The motion was seconded, put to a vote and carried.

Dr. Quigley: (c) "Each Component Society, at its annual meeting, shall elect an Alternate Delegate for each Delegate. A Delegate unable to attend the annual meeting of this Society shall assign his Delegate card to his Alternate, and such Alternate shall have all the rights and privileges of a Delegate. When such Alternate registers and is seated in the House of Delegates, he shall retain his seat during the entire meeting."

Dr. Kraker: I would suggest if each Component Society shall elect an alternate delegate for each delegate, that might be a rather difficult situation, because as I read it, that would mean that if Mr. Jones was the delegate and Mr. Brown the alternate, Mr. Brown would have to be his alternate. I think it would be much fairer if we would say that each Society shall elect an equal number of al-

ternate delegates in accordance with that definite quota. The reason for that is that then any Society, if it is only a Society of three delegates, if they have to elect three alternates and have a membership of twenty, finds a particular delegate cannot attend, it would not be an alternate for him, because they have to be elected at the annual meeting.

I move there be an equal number of delegates elected for the delegate quota.

Dr. Pinneo: One embarrassment would be if they don't attend, there would be no such representation because there is no provision for any alternate.

Secretary Morrison: This will give rise to confusion in the office of the Secretary in issuing statements, that is, issuing the regular cards sent out prior to the call of the assembly of this House. It seems to me if a delegate is elected at the annual meeting, that an associate can be provided who will make it his business to be here. If his name is not specified on the card, as it is on the delegate's card sent out to the American Medical Association, any delegate can come down here or come to my office or write to my office and claim he is an associate delegate and the card would have to be given him. What arrangement is going to be made so there is a certification to the fact that this man is an alternate delegate?

Dr. Kraker: I think that is not such a very difficult situation. If, for instance, the county has fifty-seven delegates and they elect fifty-seven alternates, the fifty-seven alternates can receive credentials. The point is they shall not receive credentials as alternate for Dr. Jones or Dr. Brown; they will merely receive a credential as an alternate.

Secretary Morrison: Specify it in your motion.

Dr. Kraker: It is.

Dr. Quigley: Mr. President, I move that Dr. Kraker draw an amendment to that particular section and that for the moment we pass it and return to it later.

President Conaway: All right, Section 4.

Dr. Quigley: Section 4. "All members of Component Societies in good standing, not otherwise included in the membership of the Medical Society of New Jersey, are hereby constituted Associate Delegates, and may partake in all the privileges of the general scientific sessions."

I move the adoption of Section 4.

The motion was seconded.

Dr. Marvel: Mr. President, I merely rise to make a suggestion, not an objection. The associate delegate, it seems to me, since these members are listed, as it were, to participate

in the scientific part of the meeting and are not privileged in the House of Delegates, might just as well be termed associate fellow.

Dr. Quigley: I think not, for the reason we have already defined the meaning of the word "fellow" and the fellows are the ex-presidents of the Society. I think that would confuse you.

Dr. Marvel: Well, will it not have the same effect upon associate delegates? Will it not carry with it the idea if they are associate delegates, they have privileges in the House of Delegates, which they will not have?

Dr. Quigley: I think that the term is plain. They are not delegates; they are merely associate delegates. They are not alternate delegates. I don't think there would be any confusion.

The motion was put to a vote and carried.

Dr. Quigley: Section 5. "Honorary members shall be physicians and surgeons who have attained distinction in the profession and may be elected by a two-thirds vote of the House of Delegates, provided they shall have been recommended for election by the Committee on Honorary Membership, and provided further that the number of living Honorary Members shall not exceed fifteen."

I move the adoption of Section 5. I beg your pardon, I haven't finished reading it.

"They shall have the privilege of discussing all scientific questions presented at the sessions of the Society."

I move the adoption of Section 5.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Section 6. "Any physician, resident or non-resident of the state, may, upon invitation of the Society or the House of Delegates, become a guest during the annual meeting, and shall be accorded the privilege of partaking in the scientific work of the Society."

I move its adoption.

Dr. Wilson: May I ask a question? It says "upon invitation of the Society or the House of Delegates." Who is the Society?

Dr. Quigley: The Society is the Fellows, the Officers and the elected Delegates, and the House of Delegates, as you will later see, has the same composition. There should be a slight correction in the copies you have; on the first line it should be "physician" instead of "physicians".

Dr. Marvel: Just one other point there. Your attention should be called to this I think. It says "Any physician, resident or non-resident of the state". It doesn't indicate the state; of course, if you impress the article "the" it indicates New Jersey. You haven't

mentioned New Jersey anywhere in the clause, so would it not be well to put it, "of the State of New Jersey, may, upon invitation," and so forth?

President Conaway: Do you accept that?

Dr. Quigley: Yes. Is the idea to limit it to this state?

Dr. Reik: Of "this" state, instead of "the" state.

Dr. Quigley: In the fourth line from the bottom of the page, in Section 6, the wording should be "this state" instead of "the state".

Dr. Marsh: I think I have sufficient respect for my state to think among ourselves "the state" means this state.

Dr. Pollak: Why not leave it all out and say "any physician may upon invitation", etc.?

Dr. Costill: Any physician in good standing in his own state.

Secretary Morrison: How are we to know when he comes here as a guest whether he is in good standing in his state?

Dr. Quigley: I move the section be amended to read as follows: "Any physician may, upon invitation of the Society or the House of Delegates, become a guest during the annual meeting, and shall be accorded the privilege of partaking in the scientific work of the Society."

President Conaway: All those in favor of Section 6 being amended as read, please say "aye". Contrary, "no". It is adopted as read.

Dr. Quigley: (Reading amendment to Section 3 (c) submitted by Dr. Kraker) "Each Component Society, at its annual meeting, shall elect an alternate delegate. Each Component Society shall elect an equal number of Alternate Delegates for the quota of Delegates for each Component Society."

That doesn't say that, because it says it shall elect an Alternate for each Delegate. Here you elect an equal number and any Alternate may then alternate for any delegate. The way we have it here, you have a particular alternate for a particular delegate, which this provision I think changes.

Voice: It doesn't say when they shall be elected.

Dr. Quigley: Each Component Society at its annual meeting. I don't think there is any doubt about the meaning of the thing. What was intended, I think, is that an equal number of alternates shall be elected for the quota for each County Society and in the event of an alternate being absent, any one of these alternates may take his seat.

President Conaway: Read it again.

Dr. Quigley: "Each Component Society at

its annual meeting shall elect an equal number of Alternate Delegates for the quota of Delegates for each Component Society and a Delegate unable to attend the annual meeting of the Society shall assign his Delegate card to an alternate."

Secretary Morrison: Strike out the word "his" and put in "a".

Dr. Quigley: "Such Alternate shall have all the rights and privileges of a Delegate."

Dr. Teimer: Who should select that particular alternate?

Dr. Quigley: The usual way has been where Annual Delegates are absent, for the Chairman of the delegation to submit to the Secretary his list of alternates. There was nothing in the old Constitution as to exactly how that was done, but that is the method that was pursued.

Dr. Teimer: You understand the point is you have fifteen Alternate Delegates available. Which one of the Alternate Delegates will be selected to fill that vacancy?

Dr. Quigley: Whoever the chairman of your delegation selects.

Dr. Marvel: It seems to me, as your Secretary stated in the beginning, if you allow it as the committee presented it in the first place, it will save a great deal of confusion and indeed it will do this: It will simply put an added interest in the hands of the delegate who is not going to be able to attend the meeting and attend to the duties that have been assigned him by his Society. They have also elected another man to take his place in the event that he is not going to be here to represent the Society. They use care in the selection, and certainly the delegate would be interested in transferring the privilege to that man and trying to see that he attends the Association. Otherwise, it comes to a point not that your Society directly elects your alternate, but simply your body of alternates from that society elect him. They determine who shall take that delegate's place. It seems to me that it avoids confusion and it may avoid friction in your body of delegates if you allow it to stand as it is. Your Society names the alternate and not the body of delegates.

Dr. Kraker: The purpose of this amendment is so that an equal number of alternates may be appointed. The question of who shall serve for a given vacancy, a given delegate, is a matter of interior administration in the Society itself. I don't think it has anything to do with this. For that reason, I think it should read as it reads now—the delegate may assign his delegate card to the alternate.

Dr. Newcomb: How can he assign it when he is not here?

Dr. Kraker: He can assign it before he gets here. The success of any organization is not to have too complicated a set of regulations. I think if we leave this alone and let the situation work out, we will have very little difficulty. I think if we go on and try to determine when and where these particular changes are to be made, we are going to get into trouble. If we leave it that a delegate has a right to assign his card to any one of the alternates that are elected, that is a proposition that is up to the Society itself.

Dr. Quigley: Of course, Mr. President, the method could be taken care of very easily by some little section in the By-Laws.

Secretary Morrison: Mr. President, if provision is made in the By-Laws that a notice must be sent from each Component Society, signed by the Secretary and the President, stating such and such men are elected as alternate delegates, then we would have some record of them.

Dr. Quigley: That can be taken care of very easily in your By-Laws.

Dr. Sprague: It doesn't so state.

Secretary Morrison: Yes, it does; he shall have all the privileges during the meeting.

President Conaway: Just the one meeting only.

Dr. Quigley: I move the adoption of this Article IV, Section 4, as amended.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article V. House of Delegates.

"The House of Delegates shall be the legislative body of this Society and shall consist of the Fellows, the Officers, and the Delegates, of the Society."

I might say there is no necessity of enumerating the officers again because the officers of the Society are named or taken care of in a previous article, in Section 2, Article IV, where it states "The Officers shall be a President, three Vice-Presidents, Secretary, Treasurer, members of the Board of Trustees and Councilors."

So the House of Delegates' composition will be identical with the Medical Society of New Jersey.

I move its adoption.

The motion was seconded.

Secretary Morrison: Why leave in the comma after the word "Delegates"?

Dr. Quigley: With the comma in, it means all these, Officers, Fellows and Delegates, are of the Society.

Secretary Morrison: Will it not be more nearly correct to leave the comma out?

Dr. Quigley: If you do that, it would only speak of the delegates of the Society.

I move the adoption of Article V.

Dr. Guion: I would like to ask if the word "Delegates" means associate or permanent.

President Conaway: There will not be any more Permanent Delegates, Doctor.

Dr. Marvel: Are we voting on the question with the comma removed after the word "Delegates", or with the comma present?

Dr. Quigley: Is it your interpretation with the comma there the officers, fellows and delegates are of this Society?

Dr. Marvel: It seems to me to mean that the House of Delegates is composed of the Fellows, Officers and Delegates, and they together compose the Society. I think it would be just as well to let it read, "Fellows, Officers and Delegates".

Dr. Quigley: I move, then, Mr. President, that a period be placed after "Delegates", and the words "of the Society" be stricken out.

I move it be adopted in its amended form.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article VI. Board of Trustees.

"The Board of Trustees shall be the executive body of this Society, and shall be composed of the President, the three Vice-Presidents, the Secretary, and the Treasurer by virtue of office, and eleven members chosen from the House of Delegates, at least two from each Judicial District, who shall be elected by the Society as follows:

At the first election following the adoption of this Constitution, three members shall be elected for a period of one year, four for a period of two years, and four for a period of three years; thereafter, as terms expire, members shall be elected for a period of three years."

I move its adoption.

Dr. Kraker: I move as an amendment the word "Society" be stricken out and the phrase "House of Delegates" be inserted—who shall be elected by the House of Delegates. That is in the last line of the first paragraph. The reason for that is that "the Society" is a rather indefinite term. The House of Delegates are the only people who have legislative rights.

Dr. Marsh: The Society is specified in the Constitution.

Secretary Morrison: Mr. President, if you will allow me, when this matter was discussed with Mr. Colie, the only reason for certain stipulations appearing in this draft was to make the construction of our Constitution

legal. The Charter of this Society is granted to the Medical Society of New Jersey, it is not granted to the House of Delegates, and the laws of the state of New Jersey provide that the officers of a corporation must be elected by the corporation.

Dr. Hagerty: In Article IV, Dr. Quigley, the first section defines the Society as being composed of the Fellows, Officers and Delegates.

Dr. Quigley: Exactly.

Dr. Kraker: The reason is this: The meetings of the Society where active business may occur, in my opinion, must occur in the House of Delegates. The Society as a whole consists of the House of Delegates, Officers and Fellows. The members of the Component Societies have no status in a meeting that is not a meeting of the House of Delegates. Where anyone votes who is not a delegate, such an election would necessarily be illegal. So the word "Society" in this instance, I think, is ambiguous. I think it should be House of Delegates. They represent the Society. It is not a stockholders' meeting. It is a meeting of the representatives of the Component Societies.

Secretary Morrison: It is not an election, according to law, of the officers of the corporation by the corporation, that is all.

Dr. Kraker: Who would be the Society in the event of an election?

Secretary Morrison: The officers, fellows and delegates.

Dr. Kraker: They also constitute the House of Delegates.

Secretary Morrison: But the provision that they are elected by the Society makes it legal, that is all.

Dr. Kraker: If that is the legal opinion, I will take it.

Dr. Quigley: The same point Dr. Kraker made was made by several others. Inasmuch as the House of Delegates is the same constitution as the Society and the Society is the same as the House of Delegates, if there is any possibility of doubt as to the legality of this thing, I think we had better leave it "the Society" because they are the same body.

I move the adoption of Article VI.

The motion was seconded.

Dr. Wilson: Mr. President, I shall certainly vote for this for it will relieve me of a great responsibility. I should also like to ask the reader of the paper what his idea is in dropping the Fellows.

Dr. Quigley: The thought regarding that (the committee was unanimous as regards this section) is simply to make the Society more

representative and more democratic. There is no state society in the United States which has any such scheme for the election of their trustees as has our own. There is nothing in this which precludes a Fellow from being elected a Trustee, but under the old Constitution, once a Fellow, he was a Trustee for life. I don't think the thought behind it was that most of the Fellows should be dropped from the Trustees, but I think the idea of having Trustees forced on us for life is repugnant to us, and it doesn't take away from the Fellows any of their rights under this, and if they are still taking the same active interest, if I were a member of the Nominating Committee, certainly I would want to select most of them from their body.

I move the adoption of Article VI.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article VII. Section 1. "The House of Delegates may provide for the division of the scientific work of the Society into appropriate sections, when necessity for such division arises."

Section 2. "The House of Delegates shall organize Councilor districts within the state. This Society shall elect a Councilor from among the Delegates for each district, and the Councilors collectively shall constitute the Judicial Council."

I move the adoption of Article VII, both Section 1 and Section 2.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article VIII. Section 1. "This Society shall hold an annual meeting during which there shall be no less than one general session, which shall be open to all registered members."

Section 2. "The time and place for holding the annual meeting shall be fixed by the House of Delegates for each succeeding year. The Board of Trustees may change the time and place when necessary."

Dr. Kraker: I would like to ask what is meant by general session.

Dr. Quigley: It means a session which is open, I presume, to the delegates and the associate delegates.

Dr. Kraker: Is this a general session?

Dr. Quigley: No, it is a meeting of the House of Delegates.

Dr. Kraker: What rights should all the registered members have? Should there be business at the general session?

Dr. Quigley: No.

Dr. Kraker: Why not state the meeting of the House of Delegates shall be separate? You say, "This Society shall hold an annual

meeting during which there shall be no less than one general session which shall be open to all registered members." Why not say "Following the sessions of the House of Delegates there shall be at least one general session during the meeting"?

Dr. Quigley: We have no trouble about that because the Medical Society of New Jersey and the House of Delegates are identical. We can call a meeting and turn ourselves into the Medical Society of New Jersey and then back to the House of Delegates.

Dr. Kraker: I may be thick-brained, but this ambiguity of being a House of Delegates one minute and the Medical Society the next is confusing to me. I think in arguing this point there might be a great deal gained as the Society grows and as our attendance at the meetings increases, and it might be a good idea to follow the scheme of the American Medical Association and have the meetings of the House of Delegates at times when they will not conflict with the regular meetings of the Society.

Secretary Morrison: We are doing that today.

Dr. Kraker: I see, but there may be occasions when you will want more time.

President Conaway: We can have an extra session.

Dr. Quigley: We did that last year; we held a session and called it ourselves.

Dr. Kraker: I feel the meetings of the House of Delegates should be regularly called and held separately from all the other meetings of the Society.

Secretary Morrison: Mr. Chairman, I think this is perfectly plain. The clause states that there shall be held at least one general session. We have sessions of the House of Delegates, sessions of the Board of Trustees, sessions of the Scientific Sections. This means one general session, at which the President's address is made, by the House of Delegates and the members of the Society, and the associate members of the Society provided for are brought in and they are guests. That is where the general meeting or the general session is.

Dr. Kraker: There is no business transacted at a general session?

President Conaway: No. This is the business meeting.

Dr. Kraker: I think it is perfectly all right as long as we have the present Secretary and he interprets the rule that way. I do still feel there should be some definite statement as to the fact the House of Delegates shall hold meetings, at least one meeting dur-

ing the session, and such other meetings as may be necessary.

President Conaway: They would have to do that or there wouldn't be any session.

Dr. Marvel: Mr. President, I must confess I am in sympathy with the statements made from both sides, if it is possible to straddle the fence and sit on both sides at once. I think that while Dr. Kraker's position is well taken with reference to the business sessions of the Society, maybe you are legislating more wisely than you know when you use the words "general session", because if there are any matters that you want to seek the advice of the general assembly on, it gives you an opportunity to do that and you can talk those matters over pro and con before you go into your executive session, whether it be in the House of Delegates or the Board of Trustees or elsewhere; there are times when matters are of such importance they should be thrashed out with the general assembly to get the reflections and the opinion of the general assembly before you go into executive session.

Dr. Costill: I move the article be adopted as read.

The motion was seconded, put to a vote and carried.

Dr. Underwood: I didn't notice Article VII said "The House of Delegates shall organize councilor districts within the state. This Society shall elect a councilor from among the delegates," etc. Is that wise? Might it not happen that a councilor would be elected who might not be a delegate?

President Conaway: It should not be.

Secretary Morrison: I might say again, Mr. Colie's opinion was that all the officers should be chosen from among the elected delegates in order to have the construction of this house legal, so it is provided the councilors shall be chosen from among the elected delegates, and the Lord knows we have enough.

President Conaway: It is a legal opinion, Dr. Underwood.

Dr. Quigley: Article IX. Officers.

"The Officers, except the Fellows and members of the Board of Trustees, shall hold office for one year, or until their successors are elected and installed."

That should be Section 1, which should be placed before the words "The Officers".

Section 2. "The Officers shall be elected by this Society the second day of the annual meeting, by ballot, and no member shall be eligible to more than one office at the same time except the President, the three Vice-Presidents, the Secretary, and the Treasurer,

who by virtue of office, are members of the Board of Trustees. A vacancy occurring between the annual meetings shall be filled *ad interim* by the Board of Trustees."

I move the adoption of Article IX.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article X. Funds and Expenses.

"Funds for meeting the current expenses of this Society shall be provided for by an annual *per capita* assessment upon each Component Society, by donation, by sale of its publications and from miscellaneous revenue. During the Annual meeting funds may be appropriated by the House of Delegates for the expense of the annual meetings, for publications, for expenses of Officers and Committees, but for no other purpose, unless authorized by a two-thirds vote of the House of Delegates, approved by the Board of Trustees."

I move the adoption of Section 1.

Dr. Kraker: The approval of the Board of Trustees, in my opinion, is rather an unfair thing. The House of Delegates, decided according to the opinion of Mr. Colie, is composed of the Fellows and Officers and the elected Delegates. It strikes me the creation of a super-group within the Society is entirely unnecessary. It is not a check, because there is no check on the Board of Trustees. I would suggest that the word "approved" be stricken out and the wording be "unless authorized by two-thirds vote of the House of Delegates and recommended by the Board of Trustees". The Board of Trustees should constitute the Ways and Means Committee and your Finance Committee, you will find later on in the By-Laws. The Board of Trustees are a proper body to create the demands of the Society, that is, to advise as to the recommendation of funds to be spent and appropriated. For that reason, I suggest that the wording "and recommended by the Board of Trustees to the House of Delegates".

Dr. Marvel: Mr. President, having acted as a Trustee for a number of years in a larger body than this—in a greater association of which this body is a part—this question came up not infrequently, but we must stop and consider what the Board of Trustees are as compared with the House of Delegates. The House of Delegates is your legislative body; they meet but one time a year. There is a tremendous amount of business that has to be rushed through the session of the House of Delegates. Your Board of Trustees meet a number of times during the year if the business is such as to demand their

meeting. They have time to sit and think over the advisability of doing this, that or the other. They are the responsible body, just as responsible as the House of Delegates and they have more time to give to the deliberations of their sessions than has the House of Delegates. Furthermore, it seems to me that if you put into the House of Delegates both the advantage of voting an act and then determining whether that act shall be executed or not, you have gone out of the legislative body and given the power of the executive to the legislative body, and I think you had better let it remain exactly as it reads. It should have the approval of the Board of Trustees; there should be a check.

There were a number of things that came up in the American Medical Association where the Board of Trustees put a check on it and the House of Delegates in the first place were rather disturbed about the check, but after they were enabled to see the justice of the position they were perfectly satisfied to have been checked.

Dr. Kraker: I think the argument Dr. Marvel gave covers it to a certain point. I don't see why the Board of Trustees shouldn't be a responsible body to consider all necessary expenditures, but, again, if we take Congress, the House of Representatives, they are a legislative body, but they are the only people who appropriate. The executive body does not appropriate. I believe they should spend properly, but I think the appropriation should be properly in the hands of the House of Delegates. You will notice later on the entire funds of the Society are in the hands of the Board of Trustees without any reference to the House of Delegates.

I think in this instance I will offer another amendment, that is, that instead of the present Section 2—

President Conway (interrupting): That is another section. Let's finish the first one first.

Dr. Kraker: I insist on my amendment.

Dr. Scammell: Mr. President, I want to say that I concur with Dr. Kraker in what he has to say. It seems to me it is putting pretty much authority into the Board of Trustees. I think the legislative matters pertaining to the expenditure of the money, as suggested, just like the House of Representatives pertaining to money matters, originate there and they vote on them. It seems to me money to be expended by the Society ought to have two-thirds vote of this House of Delegates. That ought to be sufficient. I think two-thirds of this body ought to know whether a thing is right or not and recommendation by the Board of Trustees seems perfectly proper, but to be approved by them, what does the action of the

House of Delegates amount to if that has to be done? It seems to me we are a congregation of children and we must do what the parent says, and if we don't do what he says, he can say "No". It surely doesn't give us much authority or much say in the matter. We have to vote on the thing and then have it approved by the Board of Trustees. This is all in due deference to the Doctor on my right and the committee.

Secretary Morrison: This House of Delegates is not infallible. Last year this House of Delegates went on record by a large majority in favor of annual registration. Annual registration is not going over. The action of the House of Delegates was afterwards set aside by the judgment of the Welfare Committee.

The parallel drawn that this is in accordance with the actions of Congress is not so. There has been an age long conflict for centuries going on in the House of Commons and the House of Lords in Great Britain on the origin and passage of supply bills. Supply bills may originate in the House of Commons but they cannot become a law with the Premier's signature over the passage in the House of Commons; they must be passed by the House of Lords.

A supply bill might originate in the House of Representatives but no bill can come from the House of Representatives to the President's desk for signature; it must be passed upon by the upper house. It is so in all legislative bodies.

For 160 odd years the Board of Trustees in New Jersey have been the body in control of our funds and our finances. They have been looked upon with high respect, and as far as my study of the archives goes, during all those years there has been no objection by the House of Delegates to the action of the Board of Trustees in the control or the dispensing of our funds. Delegates are elected from among the ordinary membership and come down here for three years. They have not the interest in the State Society that the Trustees have, they are not the same matured minds, they have not studied the conditions surrounding the State Society to the same extent. You pick out from among the very best element in the Medical Society of New Jersey high-class men to be your Trustees and then you say you don't trust them to vote your money. It seems to me that in the interest of the very idea of this Board it is apparent, taking care of the actions of the children, and by and by the child grows up and he takes care of the actions of his own children. It seems to me very expedient that we should provide a check upon a meeting held

here once a year and after that, that matter must be carried into effect. There must be a check where further consideration can be given by matured minds. I think it is high discretion on our parts to provide that appropriations should always have the approval of the Board of Trustees.

Dr. Stahl: Mr. President, it seems to me that if the Board of Trustees back up their budget and make their recommendation and then for no other purpose the House of Delegates appropriates that money, that would be a legitimate check for both parties.

Dr. Costill: I move the section be passed as read.

The motion was seconded.

President Conaway: Dr. Kraker suggested an amendment that the word "approved" be changed to "recommended".

Dr. Stahl seconded the amendment.

President Conaway: The question before the house is on the amendment suggested by Dr. Kraker and seconded, that the word "approved" shall be stricken out and the word "recommended" substituted in the last line of Section 1, Article X. Are you ready for the question? All those in favor of the amendment, please rise. (Twenty-three members arose). All those not in favor of the amendment, please rise. (A great majority arose). The amendment is lost.

We will now vote on the article as read.

The motion was put to a vote and carried.

Dr. Quigley: Section 2. "The Board of Trustees may incur any necessary expense *ad interim*."

I move the adoption of Section 2 of Article X.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article XI. Seal.

"The Seal heretofore adopted and now in use, shall continue, until otherwise ordered, to be the Seal of the Society."

I move the adoption of Article XI.

The motion was seconded, put to a vote and carried.

Dr. Quigley: Article XII. Amendments.

"This Constitution may be amended by this Society by two-thirds vote of the members present at any annual meeting, provided that the proposals for amendments have been considered by the Committee on Constitution and By-Laws, and provided further that such proposals for amendments shall have been submitted in writing at a previous annual meeting, and shall have been published in the Journal of this Society and officially sent to each Component Society at least three months before the annual meeting at which final action is to be taken."

I move the adoption of Article XII.

The motion was seconded, put to a vote and carried.

Dr. Wilson: You went over Article XI so rapidly you didn't give us a chance. It says, "The Seal heretofore adopted and now in use, shall continue, until otherwise ordered." Why not stop there? What is the sense of putting in the words "to be the Seal of the Society"?

Secretary Morrison: It is not a finished sentence. The Seal heretofore adopted and now in use shall continue unless otherwise ordered—that is not a complete sentence.

Dr. Wilson: It isn't complete?

Secretary Morrison: No.

Dr. Quigley: Mr. President, I move that the Constitution as now read be adopted in its entirety as on first reading.

The motion was seconded.

Dr. Hollinshed: As a matter of information, on the second page it says, "In event a Component Society shall become delinquent to this Society, the entire delegation of such Component Society shall lose its standing".

I think it was last year that matter was brought up before the Society here and the question of just what constituted a delinquent society was talked over and the matter was tabled. We will say a Society had ninety-five members this year and paid \$950 to the treasury of the State Society. Next year if only fifty of those members paid their dues, would that Society become delinquent or would the Society retain its full membership if \$500 were paid in? Do I make myself clear? What constitutes a delinquent Society?

Secretary Morrison: Mr. President, we must bear in mind all the time that the State Society does not deal with individual members of Component Societies. Dr. Marsh may not of necessity keep a record of the individual \$10 sent to him every year by individual members. The dues are payable by the Component Society and they collectively send in their list to the Treasurer. It may have 50%, it may have 30% unpaid, but the county cannot be declared delinquent unless that action is taken by the House of Delegates. So there is no fear at all that 40% of the membership who pay their dues might become declared delinquent. That would have to be done here on the floor at a subsequent meeting. I don't think there is any fear at all about that.

President Conaway: The question before the house is the adoption of the twelve articles of the Constitution as read at the first reading.

The motion was put to a vote and carried.

President Conaway: The next order of

business is the report of the Committee on Group, Health and Accident Insurance. Dr. Pinneo.

Dr. Pinneo read his prepared report.

Annual Report of the Committee on Health, Accident and Automobile Insurance

This Committee submits its Second Annual Report with satisfaction that the problems of securing good contracts on Group Insurance have been so successfully met and that the members who have taken them are well pleased. It remains for us next to increase the number of applicants and thereby improve the chances of benefits which all derive from the larger group. The hearty endorsement throughout the year, by President Conaway, of the policies offered, is warmly appreciated.

The Health and Accident policy (principal sum \$5000), with the Commonwealth Casualty Company of Philadelphia, provides indemnity for total and partial disability from both illness and accident, with double indemnity for "travel" accident. It is negotiated by doctors for doctors for the many contingencies to which they are subject, and the premium rates are remarkably low—\$60, or not over \$85, per year, without age limit. When this work of securing Group Insurance against accident and illness began last year the requirement of the companies was that 75% of all members must apply; this has been overcome in the negotiations for the present policy, so that now no percentage quota of applicants is required and every member gets his policy promptly after application. Renewal for the second year has now been secured and all members of the society are urged to study its benefits. We invite comparison of this policy with any other obtainable, and will gladly investigate and answer any questions on the subject.

The suggestion, last year, of President Green that Group Automobile Insurance also would be an advantage to the members was referred to this committee and has been followed with successful negotiations resulting in the offer of complete policies. The one on Personal Liability and Property Damage is at a premium 15% off the standard table plus a dividend of 15% more at the end of the year. This policy is with the Manufacturers' Casualty Insurance Company of Philadelphia. The one on Fire, Theft, Collision and Transportation is the Valued form, naming in each policy a definite value, fixed according to the cost and age of the car insured, and the premium is 20% off the standard table.

The Health and Accident Insurance has been taken by 255 members. Among these, claims have been paid to 24, in amounts ranging from \$25 to \$682.14, and amounting to \$3849.16. It will be seen at once what a benefit this has been to the claimants in consideration of the very small cost; and, as frankly stated by certain recipients, that the accident, or illness, was so utterly unforeseen.

The Automobile Insurance has been taken by 83 members, of whom 2 have received benefits from claims amounting to \$26.60.

The following are some quotations of commendation and appreciation from members in acknowledgement of benefits received:

"I want to thank you for the excellent policy you are giving me. Kindly accept my

heartiest thanks and sincere appreciation for your prompt attention to my recent claim."

"I wish to thank you for your prompt attention to the settlement of the claim. The check is in full payment and satisfactory."

"I beg to acknowledge with thanks your remittance of \$135.71, which meets with my approval."

"I wish to acknowledge your prompt check with thanks. I have always been an enthusiastic supporter of our Medical Society Insurance Group Plan, but never suspected or thought its value would be brought home so soon to me."

"I wish to thank you for the prompt settlement."

"The unquestioning liberality of your settlement is appreciated."

Beside periodic circular letters to all members of the Society, articles in the State Society Journal have given particulars and all necessary information and to these we refer you all, especially to articles in April, 1927, p. 254; November, 1927, p. 649; and April, 1928, p. 323.

The total expenses for the year have been \$278.25, wholly for necessary printing and postage, nothing for insurance soliciting, or any other labor or traveling expense; and most of the postage as well as the office labor, has been borne by Mr. Denner as agent. The labor of correspondence by the committee has, of course, been no expense to the Society.

We earnestly commend these policies to every member and recommend the maintenance of committee work and provision for its necessary expenses.

Respectfully submitted,

Frank W. Pinneo,
Chairman.
Ralph K. Hollinshed,
Fred J. Quigley,
Clarence W. Way,
J. Finley Bell,
Austin H. Coleman,
James S. Green.

Dr. Pinneo: I would supplement this with the report that these expenses are the minimum, that in the matter of postage the agent has borne almost all of it, so that these little items of expenses that have occurred are those that would be incurred by any committee of the society conducting the work. If it were covered up, for example, in the Secretary's budget, it would still be about the same item, and the correspondence necessary is that which keeps this alive. Remember that this was not insurance sold to us by the companies, but insurance developed by us and the idea sold to the companies.

Dr. Hollinshed: I move the report be received for adoption and the recommendations be concurred in.

The motion was seconded.

President Conaway: What recommendation particularly did you want?

Dr. Hollinshed: That the recommendations of the committee be concurred in.

The motion was put to a vote and carried.

President Conaway: We will have a report from the Committee on Business, Dr. Hager-ty. Dr. Stewart, can you report for that committee?

Dr. Stewart: Dr. Hager-ty has all the papers.

President Conaway: Committee on Honorary Membership, Dr. Harvey. The report this morning was wrong.

Dr. Harvey: I apologize for not being present at the time the committee should have reported.

The Committee on Honorary Membership have received the following communication and have considered it and would like to recommend for honorary membership in the State Society, Dr. Floyd McEwen, of Newark. I would like to read this letter from the Essex County Medical Society, if you please.

Dr. Harvey read the following letter:

June 3, 1928.

Committee on Honorary Membership,
Medical Society of New Jersey.
Dr. T. W. Harvey, Chairman.

Gentlemen:—

Will you receive a suggestion from the Essex County Medical Society for the election to Honorary Membership, the name of a member whose faithful toil, under exceptional handicap, for an extraordinary cause, has also been fundamental in maintaining a world-wide honor to the medical profession? The following action of the Essex County Medical Society, last January, expresses the case:

"Among the important factors in Modern Preventive Medicine and Public Hygiene, *Certified Milk* has an outstanding place. As the standard by which all milk is measured, and recognized among other civilized peoples, it is fitting that Essex County should be remembered as the cradle where it was born. The burden of the maintenance of organization as the means for maintaining honored reputation for high standards, has, since Dr. Coit's death, fallen mainly upon one of our members whose toil for and devotion to the cause have been most unselfish. Our Constitution provides—"practitioners of medicine of this or other states and members of this Society, who for a long series of years have faithfully served it and whose age or infirmities prevent their regular attendance upon the meetings of the Society may be elected as Honorary Members," therefore, "Dr. McEwen is hereby elected Honorary Member, without County Society dues, all rights and privileges of regular membership in both County and State Societies being retained—his name to continue on the regular list of members and the treasurer of the Essex County Medical Society empowered to pay any dues to the Medical Society of New Jersey."

Would your Committee like to recommend Dr. McEwen's election, as Honorary Member in the

State Society, providing also that his name be retained as a regular member, to provide for all privileges, such as insurance, etc.?

Respectfully yours,

Frank W. Pinneo,
Secretary.

Dr. Harvey: In other words, it is not desired that election to an honorary membership in this body should affect his privileges as an active member. Those of us who know Dr. McEwen know it is well deserved and the committee would recommend his election as an honorary member to the society.

The motion was seconded.

Dr. Marvel: May I arise for a question of explanation? If, under the conditions presented, Dr. McEwen is elected an honorary member, does that not necessarily restrict him in the very recommendations that Dr. Harvey has made, because he becomes an honorary member, and an honorary membership is defined in your Constitution? The privileges of an honorary membership are defined in your Constitution.

Secretary Morrison: Mr. President, the State Society may elect any Doctor for worthy causes an honorary member. If that Doctor is still in active practice and needs the protections that this society provides for him, he carries on his active membership in the County Society as well. That is instanced in the case of Dr. E. J. Ill who is an honorary member. This provision was made by Essex County so that Dr. McEwen, who is crippled, might continue in practice and have the protection while he is so engaged and beside that so that he might be an honorary member of this body.

Dr. Marvel: I only arose for an explanation because I didn't want the Society to go on record and cut off the privileges you were asking for.

Dr. Harvey: Dr. Wickes for many years was an honorary member of this society, serving as the Chairman of the State Committee, so that it is not an unusual thing.

President Conaway: You have heard the report of the Committee on Honorary Membership. What is your pleasure?

Dr. Stewart: I move Dr. McEwen be elected to honorary membership and the Secretary cast the ballot.

The motion was seconded, put to a vote and carried.

Secretary Morrison: The ballot has been cast, Mr. President.

President Conaway: Dr. McEwen is elected to honorary membership. He still retains his active membership in his local society.

All those in favor of the report of the Com-

mittee on Honorary Membership being adopted, will signify by saying "aye." Contrary, "no." The report is adopted.

Has anyone any credentials to report to the Recording Secretary in regard to the Nominating Committee? They should be read today because tomorrow is devoted entirely to the scientific program. If not, will you read the names you have?

Secretary Morrison: I have no names of members of the Nominating Committee. The Constitution provides that at the annual meeting of each Component Society they shall elect a member to the Nominating Committee and that member is given his credential signed by the President and Secretary. Those credentials are to be presented here prior to the meeting, prior to the assembly of the Nominating Committee. None have been handed in.

President Conaway: The report of the delegates to the American Medical Association and to State Societies. Inasmuch as that report was given last year and the American Medical Association has not met since the report was given, we do not expect a report from the delegates, since they do not function until next week.

Dr. Marvel: As this is the meeting of your House of Delegates and the matter of the Nominating Committee is a matter concerning the House of Delegates, would it not be wise for you with the privileges of the House of Delegates to appoint a definite time tomorrow morning at which these credentials shall be in, because otherwise your meeting tomorrow is a scientific meeting and you can't accept them excepting by the advice and direction of the House of Delegates.

President Conaway: We might call the roll of the different counties and see how many have their credentials presented here for the Nominating Committee. That might expedite matters a little bit.

Recording Secretary Morrison called the roll of counties.

Secretary Morrison: We have 4.

President Conaway: The Chair will order the members of the Nominating Committee to present their credentials to Dr. Morrison tomorrow before 11 a. m.

Is there any further business before the House of Delegates?

Dr. Stewart: The Business Committee has considered the reports referred to it and approves of the recommendation made by the Executive Secretary in his annual report concerning the Tristate Conference, periodic health examinations and employment of assistants; that the matter of endorsement of cigaretttes, attention to which has been called

by the Medical Review of Reviews, does not seem of sufficient importance to warrant further consideration by this Society; that the public health platform of the Cattaraugus County Medical Society of New York, embodied in 8 principles, which have been advocated by the State Medical Society of New York be endorsed; that the recommendation of the Committee on Liability Insurance advising members of the State Society to avail themselves of the group insurance be endorsed and that the work of the Assistant Executive Secretary be approved.

Respectfully submitted,

John F. Hagerty,
E. D. Newman,
W. Blair Stewart.

I move the recommendations in this report be approved and adopted.

The motion was seconded, put to a vote and carried.

President Conaway: If there be no further business, a motion to adjourn is in order.

Dr. Marvel: I move we adjourn.

The motion was seconded, put to a vote and carried. The meeting adjourned at 4:20 p. m.

Friday Afternoon Session

June 8, 1928

The House of Delegates convened at the close of the last scientific session in the Vernon Room of Haddon Hall, Atlantic City, New Jersey, at 4:35 p. m., President Conaway presiding.

President Conaway: The meeting will please come to order.

Dr. Newman: I move the report of the Budget Committee be adopted.

The motion was seconded, put to a vote and carried.

President Conaway: We can take up the matter of the meeting place of this Society for next year. I might say that the Nominating Committee suggested Asbury Park by a vote of 12 to 6, and Dr. Fisher of Asbury Park would like to make a few remarks.

Dr. Fisher: Thank you, Mr. President. The city of Asbury Park, the Chamber of Commerce, the Asbury Park Medical Society and the Monmouth County Medical Society issue a very cordial invitation to the New Jersey State Medical Society to meet with us next year. We feel that we have grown a little bit since you were there last, which has been a number of years ago. We feel that we can entertain you royally, as we have been entertained here in Atlantic City the past few

years. We would just like to show this Society what we can do in Monmouth.

President Conaway: Could you give us as much room as we have here this time, as many meeting places, a room the size of this, 2 other rooms for sections and a room for exhibitors?

Dr. Fisher: Yes.

President Conaway: And 2 rooms such as we have across the street for the Woman's Auxiliary?

Dr. Fisher: Yes, because we have the use of the Solarium out in front. I would suggest the Monterey and Berkeley Carteret hotels.

President Conaway: How far apart are they?

Dr. Fisher: Next door.

Dr. Pollak: Mr. Chairman, while we consider the invitation of Monmouth County, I think it is apropos to remember that next year not only will the International Hospital Association and the New Jersey Hospital Association meet here, but also the National Tuberculosis Association, and I believe from the present indication that the American Medical Association will meet here next year. It might be a very wonderful opportunity for the medical men of this country to get together at one time, as it is intended, and for that reason I would like you to consider again Atlantic City. Furthermore, we know what we have been receiving here and the accommodations that we have here. The accommodations at the hotels the Doctor mentioned are not equal to the accommodations of this particular hotel. I am not speaking for any personal reason for the hotel.

Inasmuch as under your leadership the various scientific sections have been introduced and they will probably be augmented next year, we ought to consider carefully before we make any decision in the matter, and it might be well for us, because there are not many delegates here, to submit the matter to the Trustees for a very careful consideration pending the decision of the American Medical Association—with all due deference to the invitation received from Dr. Fisher of Monmouth County.

Secretary Morrison: May I have a word? I am heartily in accord with the idea of taking this convention to Asbury Park if Asbury Park can offer us fully and completely the accommodations we are receiving here. Your officers and your committees have done an enormous amount of work this year to make this meeting a success. We have had a registration of 1000. We have had the most enthusiastic meeting in my connection with the

State Society's history. We can't afford to put a crimp in next year's program by lacking space and facilities. The Doctor says he can get the Solarium and have it properly divided up. Here we have this room with a seating capacity of 300, two adjoining rooms with seating capacities of 100, and 4 or 5 committee rooms, and across the street in the other hotel, 2 rooms the Woman's Auxiliary have been using, with an equal number of committee rooms. We must have that much space guaranteed next year and we must know what the charge will be for the delegates' board, whether we will have a charge of \$8 to \$10 as here, or whether we will have the Carteret's usual pretty well advanced charge.

I suggest you entertain a motion to go to Asbury Park but leave it to the approval of the Committee on Arrangements after investigation, and approval of the Board of Trustees.

Dr. Mulford: Another thing that hasn't been mentioned in this connection is the fact of the rapid and successful growth of the Woman's Auxiliary. They are contemplating big things for next year and they have had a most successful meeting over there, and they are counting on coming back here. I don't know whether it would be wise for us to disrupt that movement, because if we go over to Asbury Park, they will of necessity come too. It seems to me it might be quite wise to adopt the suggestion of our Secretary.

Dr. Costill: Mr. President, I move, to get this thing before the house, that the matter of the suggestion of the Nominating Committee, the invitation of the Asbury Park Chamber of Commerce, be forwarded to the Board of Trustees and the matter be left in their hands with power to investigate and act.

The motion was seconded, put to a vote and carried.

President Conaway: The matter will be referred to the Board of Trustees.

President Conaway: That, gentlemen, I believe concludes the one hundred and sixty-second annual meeting of the Medical Society of the State of New Jersey, excepting for a social session tonight and the series of clinics in the Atlantic City Hospital tomorrow morning to which you are all invited.

Allow me at this time to thank each and every one of you for your kind indulgence, and with due apologies for all my mistakes and shortcomings, but with best wishes for the future success of this Society, I take great pleasure in handing this gavel of authority to my successor, Dr. Mulford, who will now address you. (Applause.)

Dr. Mulford: Ladies and Gentlemen and Fellow Members, it is indeed a great pleasure

—it sends a thrill up and down my spine—to stand here and feel that I am now to be united in work with you, in the chair as President.

First, I want to quote the old schoolmaster of ours who said in an address to the graduating class the year we came out that a man or woman accomplishes his or her purpose in life by first, intelligence; second, energy; third, persistence; fourth, personality, and last but not least, fifth, tact.

I want to congratulate our President, Dr. Conaway, on having possessed all of these virtues and having put over the largest registration of any meeting in my recollection and perhaps in the history of the association. It certainly has been, I believe, the most successful meeting in so far as the scientific aspect is concerned and certainly in the harmony that has prevailed both individually and collectively.

Just 3 years ago when my friend, Donohoe, came to lead us, he encountered storms of all kinds and at every turn it just seemed like things he would attempt were blocked. He began to tour the state and visit the different Component Societies. Some of the presidents before had visited some of the societies, but Donohoe foresaw that if the medical men in New Jersey were to be gathered together as a component unit, great work must be done

and these annual visitations would have to take place, and together Dr. Morrison and Dr. Reik and some of the other workers journeyed from county to county. In some of the counties there hadn't been a meeting for 2 years or more and some of the counties were only having 1 meeting a year. I had the pleasure of going with Donohoe to 2 or 3 of those meetings. There again, Dr. Conaway, you have crystallized the missionary work by energy unsurpassed, and we have had this great meeting in 1928, the most harmonious and peaceful gathering I have known.

Now, remember, Conaway is a small man compared to me, and large bodies move slowly, so don't expect too much from me. (Laughter.)

The place of meeting we have already decided. I hope it will be my privilege to know each one of you individually, and I want to solicit a continuance of your help, a continuance from all the Fellows, a continuance from the heads of all the committees, and a continuance from all the Delegates and all the Officers, and with that we can make the meeting of 1929 perhaps more successful than this one. Thank you so much. (Applause.)

President Conaway: The meeting is now adjourned.

The meeting adjourned at 5.45 p. m.

GENERAL SCIENTIFIC SESSIONS

Thursday Morning, June 7, 1928

SYMPOSIUM ON PHYSICAL THERAPY

The meeting was called to order in the Vernon Room of Haddon Hall, Atlantic City, New Jersey, at 9:40 a. m. by President Conaway.

President Conaway: The initial paper on our scientific program will be given by Dr. William Martin, of Atlantic City, on "Physical Adjuncts to Surgery."

Dr. Martin presented his prepared paper.

President Conaway: The discussion on this paper will be postponed until after the reading of the next—"Physical Therapy Aids in Fracture and Orthopedic Cases", by Dr. William Doran, of Jersey City.

Dr. Doran presented his prepared paper.

President Conaway: These two very interesting papers are now open for general discussion.

Discussion followed by Drs. Corbusier, Weeks, Weigel, Martin and Dorn.

President Conaway: The next paper will

be by Dr. Harry E. Stewart, of New Haven, Connecticut, "Present Status of Diathermy in Pneumonia".

Dr. Stewart presented his prepared paper.

President Conaway: This paper is now open for general discussion.

The following named participated in the discussion: Drs. Cotton, Perlberg, Schaffler, Morrison, Martin and Stewart.

Dr. Andrew F. McBride, Second Vice-President, took the chair.

Chairman McBride: The next paper on the program is by Dr. Charles R. Brooke, of Newark, "Ultraviolet Rays in the Treatment of Affections of the Nose, Throat and Mouth".

Dr. Brooke resented his prepared paper.

Chairman McBride: Dr. Brooke's paper is now open for discussion.

If there is no discussion, I am going to ask the varicous county representatives to hand in their members' names for the Nominating Committee.

The next paper on the program is by Dr.

S. T. Snedecor, of Hackensack, "Physical Therapy in the Hospital", with moving pictures of the apparatus in use.

Dr. S. T. Snedecor read his prepared paper and exhibited pictures.

Chairman McBride: Dr. Snedecor's paper is now open for discussion; if anyone wants to ask any questions or make any comments, now is the time.

Those taking part in the discussion were Drs. Brooke, Corbusier and Snedecor.

Secretary Morrison: If there are any other members of the Nominating Committee from the component societies who have credentials or who have not their credentials, will they please come forward.

Chairman McBride: We will now adjourn until 2 o'clock this afternoon.

The meeting adjourned at 12:45 p. m.

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Thursday Afternoon, June 7, 1928

SYMPOSIUM ON GYNECOLOGY AND OBSTETRICS

The meeting was called to order at 2:20 p. m. by President Conaway.

President Conaway: The first paper on our program this afternoon is entitled "A Plea for Early Recognition of Cancer", by Dr. Edward J. Ill, of Newark.

Dr. Ill presented his prepared paper.

President Conaway: This paper is now open for general discussion.

Discussion followed by Drs. Kraker, Penn, Stevens and Ill.

President Conaway: The subject of our next paper is "Recent Progress in Gynecology". It affords me great pleasure, gentlemen, to introduce to you Dr. John Osborn Polak, of Brooklyn, New York.

Dr. Polak presented his prepared paper.

President Conaway: The discussion of this very interesting paper of Dr. Polak's will be opened by Dr. Thomas B. Lee, of Camden.

Discussion followed by Drs. Lee, Walker and Polak.

President Conaway: The next paper on our program, "The Influence of Blood Chemistry Studies on the Present Treatment of Pregnancy Toxemias", is by Dr. Paul Titus, of Pittsburgh.

Dr. Paul Titus: Mr. President, may I express to you my very great appreciation of the privilege of being one of your guests today. It was a matter of particularly keen appreciation on my part that your President, in asking me to be here, should have suggested that we discuss the subject which I have found for a number of years to be of particularly en-

grossing interest from the standpoint of research study.

Dr. Titus presented his prepared paper.

President Conaway: The discussion of this paper will be opened by Dr. Royce Paddock. (No response.)

This paper is now open for general discussion.

Discussion followed by Drs. Walker, Bingham, Nevin, Cohn and Titus.

President Conaway: I have the pleasure at this time of introducing a representative of the Pennsylvania State Medical Society, Dr. A. C. Morgan, of Philadelphia.

Dr. A. C. Morgan: I feel honored at the invitation of your President to be here today. It would be presumptuous on the part of Pennsylvania to say anything to New Jersey; we dare not contrast ourselves as mother and daughter, because in these days contrast of ages between the ladies is very dangerous. So perhaps we had better use the simile of elder and younger daughters. We are happy, however, to be members of the same family of the medical profession. Pennsylvania extends her greetings to her elder sister in the most hearty manner.

Much has been said already in official reports in respect to the organization of the Tristate Conference. Your Executive Secretary is so innately modest that he did not tell you the fact that he it was who originated the idea of the Tristate Conference. There has come much of good, and only good, from our meetings thus far in the 3 years of its existence. That has been the opportunity for the ironing out of differences across the rivers, so that now instead of there being hands across the sea, there are welcoming hands across the Delaware River and the Hudson River. Further, it has given the officers of the society an opportunity to size up and to appreciate the merits of their respective societies and also the deficiencies of their societies, and I am frank to tell you that Pennsylvania has profited in such manner that we are already planning to incorporate in our future transactions some of the good points we have witnessed and observed as we have visited New York and New Jersey.

McLaren, in "The Bonnie Brier Bush", refers to an argument between the old dominie and one of his parishioners, an old Scotch Presbyterian—not referring to Dr. Morrison just now—wherein the former closed the chapter with this pungent statement, "They argued together and they prayed apart". I feel that one of the great, outstanding effects of the Tristate Conference has been the reversal of that, and that as the officers of the

3 state societies meet together in fellowship around the board, they pray much for each other and are given less to argumentative disertation.

Again, let Pennsylvania extend her hearty greetings to the New Jersey State Society. (Applause.)

President Conaway: The next paper, "Indications and Contraindications for Mechanical Interference in Delivery", will be read by Dr. S. A. Cosgrove, of Jersey City.

Dr. S. A. Cosgrove: I took the liberty of altering the title of my paper somewhat, and have called it, "Caesarean Section and Forceps: When They Must Not Be Used".

Dr. Cosgrove presented his paper.

The First Vice-President, Dr. E. R. Mulford, took the chair.

Chairman Mulford: Dr. A. W. Bingham will open the discussion, please.

Dr. A. W. Bingham, of East Orange, read his prepared discussion.

Chairman Mulford: We would be glad to hear from anyone else who would like to discuss this paper of Dr. Cosgrove's.

Discussion followed by Drs. Denton, Schauffler, Cohn, Cogan and Cosgrove.

Chairman Mulford: The meeting will now stand adjourned until tomorrow morning.

The meeting adjourned at 5:20 p. m.

Friday Morning, June 8, 1928

SYMPOSIUM ON MINOR NEUROSES AND PSYCHOSES

The meeting was called to order at 9:40 a. m. by President Conaway.

President Conaway: The first paper on the scientific program this morning is "Classification of Minor Neuroses and Psychoses", by Dr. Samuel F. Gorson, of Atlantic City.

Dr. Gorson presented his prepared paper.

President Conaway: The discussion on this paper will be postponed until after the reading of the next paper, which is "The Etiology of Minor and Major Neuroses", by Dr. C. Fred Becker, of Camden.

Dr. Becker presented his prepared paper.

President Conaway: These 2 very interesting papers concerning the classification and etiology of minor neuroses and psychoses are now open for general discussion.

Discussion followed by Dr. Schauffler.

President Conaway: Does anyone else care to discuss these two papers? Don't be modest, gentlemen. We are 12 minutes ahead of schedule, so we have plenty of time.

If no one else has anything to say, Dr. Gor-

son, will you close the discussion of your paper.

Dr. Gorson: I have nothing to say.

President Conaway: Dr. Becker, will you close?

Dr. Becker: I have nothing to add to my paper.

President Conaway: The next paper is "Pathology of Minor Neuroses", by Dr. Thomas B. Christian, of Greystone Park.

Dr. Christian presented his prepared paper.

President Conaway: This paper is now open for general discussion. Does anyone wish to discuss this paper of Dr. Christian's? The Secretary says there are only 4 men here who know anything about it.

We will proceed to the next paper, "Symptomatology and Treatment of the Minor Neuroses", by Dr. William H. Hicks, of Newark. I happen to know we are largely indebted to Dr. Hicks for this excellent symposium. He was of very great assistance to our scientific program committee in arranging it.

Dr. William H. Hicks: In discussing the topic assigned to me on today's program, there will be no attempt made to say anything new or novel or original. We have tried to keep to our own experience and belief and the experience and belief of some of the most noted neuropsychiatrists of today and of the past.

Dr. Hicks read his prepared paper.

President Conaway: This most interesting and instructive paper is now open for discussion.

Discussion followed by Drs. Einhorn, Cotton, Becker, Schachter, Morrison and Hicks.

President Conaway: We are very fortunate indeed in having with us the reader of the next paper, "What Every Doctor Should Know About Insanity", and it gives me great pleasure to introduce to you Dr. Joseph Collins, of New York City. (Applause.)

Dr. Joseph Collins: I decided to change the topic of my address to you somewhat and to make it more elementary and at the same time I think more practical. I am not quite sure that the general practitioner should know anything about insanity. (Laughter.) He isn't going to know anything about it until we reform our medical schools and they or their directors are as hard-boiled as they come. A knowledge of mental disease can be obtained only in insane asylums, and so far there is no feasibility of students receiving information other than dramatic by visiting asylums. The only way you can learn about insanity is to live with the insane. The only time you can learn about insanity is in your plastic age. If you learn your medicine first, in reality you

never can learn insanity. Insanity bears the same relation to psychology as medicine does to physiology. You must learn your physiology and your medicine simultaneously, you must learn your psychology and your psychiatry sequentially and simultaneously, otherwise you will not learn it at all.

One reason—there are 99 but I will only enumerate one—why psychiatry is not taking a place commensurate with its dignity and on a parallel with that in other countries, why it has not taken it here, is that men go into asylums after they have got through their medical course and year by year become immobilized, conventionalized, stereotyped and immune really to new ideas. The whole thing has got to be remodeled, reordered, reversed. We have been standing on our heads in psychiatry and now we have the many beneficences that flowed from the war; a recognition of the importance of psychiatry is one of them. Those who direct medical pedagogy are compelled to take cognizance of it.

The subject I shall address you on today is mental hygiene. There is this fact you must assume as proven—just in proportion as we become more civilized, we become crazier. The statistics in every state of this country show that insanity has increased alarmingly in the last 20 years and commensurate with our position of what is called commercial and practical supremacy, insanity has increased proportionately. There are more insane today in the United States in hospitals, asylums and sanitarium than there are in all the hospitals for physical disease put together. The statistics of New York state alone in the last 5 years show that insanity has increased upward of 33%. It has been attempted to explain this on various grounds, first that we are no longer afraid to be called insane; second, we don't mind if our mother-in-law is said to be insane; third, we look upon insanity as somewhat different than we did formerly; fourth, we detect it earlier, and so on. Having all those eliminated, the fact still remains that day by day in every way we are growing crazier and crazier. (Laughter.)

There is only one way to prevent it and that is a way parallel to that in which we have reduced the mortality of other diseases and parallel to the way in which we have made our greatest strides; namely, in preventive medicine. The span of life during this period I speak of has been added to enormously. Children are saved by the bushel. Parts of the world that were heretofore not only inaccessible but unlivable have been made a stepping stone to paradise. Preventive medicine!

The only place we as physicians can do any-

thing really worth while is in that department of preventive medicine called mental hygiene. So with your permission, I shall confine my remarks to that subject.

Dr. Collins read his prepared paper.

President Conaway: This literary and scientific treat is now open for discussion.

Discussion followed by Drs. Cohn and Schachter.

President Conaway: Does anyone else care to enter into the discussion?

Dr. Collins, have you anything else to add?

Dr. Collins: No, sir.

The First Vice-President, Dr. E. R. Mulford, took the chair.

Chairman Mulford: After this morning, it would certainly be presumptuous for me to add to the virtues of the man who is about to address us. It has been my pleasure during the last year to be rather closely associated with our President, and I think if you will just allow me for one second, I would like to restate what you have already heard of his wonderful activity, of his ability, of the energy he has put forth and shown in accomplishing the wonderful task of getting around and visiting the 21 component societies, of his ability and energy in coordinating and gathering the people around him and getting the work done and accomplishing so many things that heretofore have been left undone, and of my great fear and trepidation that it may perhaps be my privilege to follow in his footsteps. So this morning it is with great pleasure that I present for the presidential address, Dr. Walt Ponder Conaway.

The audience arose and applauded.

President Conaway read his address.

Chairman Mulford: I feel that I voice the sentiment expressed by the applause for this most masterful address.

We will now adjourn this meeting until 2 o'clock.

The meeting adjourned at 12:45 p. m.

Friday Afternoon, June 8, 1928

The meeting was called to order by *President Conaway* at 2:20 p. m.

President Conaway: The meeting will please come to order. The only business which we can take care of at this time is the reading of the report of the Nominating Committee and the election of officers. Is the Nominating Committee ready to report?

Secretary Morrison: Report of Nominating Committee:

The committee was called to order by Dr. James Hunter, Jr. Upon motion, Dr. James

S. Green was elected as Chairman, and Dr. E. D. Newman as Secretary; Dr. James S. Green from the Fellows.

Representatives from all counties excepting Bergen and Ocean responded to the roll call.

The following nominees were unanimously selected:

For President, Ephraim R. Mulford.

For First Vice-President, Andrew F. McBride.

For Second Vice-President, George N. J. Sommer.

For Third Vice-President, John F. Hagerty.

For Corresponding Secretary, William J. Carrington.

For Recording Secretary, J. Bennett Morrison.

For Treasurer, Elias J. Marsh.

Trustee, Fifth District, J. Harris Underwood.

Councillors—

First District, Christopher C. Beling.

Second District, Francis H. Todd.

Third District, F. G. Scammel.

Fourth District, Marcus W. Newcombe.

Fifth District, Aldrich C. Crowe.

Committee on Scientific Work, Lancelot Ely.

Committee on Public Hygiene and Sanitation: H. Garrett Miller, Harvey S. Brown.

Delegate to the A. M. A., W. Blair Stewart.

Alternates: Philip Marvel, S. B. English.

Committee on Finance and Budget, Paul M. Mecray.

Committee on Arrangements, Martin W. Reddan.

Place of Meeting:

First Choice, Asbury Park.

Second Choice, Atlantic City.

President Conaway: Gentlemen, you have heard the report of the Nominating Committee. What is your pleasure?

Dr. Kraker: I move the nominations be closed.

The motion was seconded.

Dr. Kraker: And the Secretary cast the ballot.

The motion was carried.

Dr. Kraker: Mr. Chairman, I move you, sir, the recommendation for Asbury Park be the choice of the Society.

President Conaway: Dr. Kraker, we will not be able to take that up now.

Dr. Kraker: It is in the report.

President Conaway: We can't decide that. There will be a short session of the House of Delegates immediately after the conclusion of the scientific program when that matter, the report of the Finance Committee, and the final report of the Trustees, will be taken up.

Secretary Morrison: The Secretary has cast the ballot for the names as presented in the report.

President Conaway: We will now proceed with the scientific program. The first paper is "Peritoneal Anomalies", by Dr. Francis H. Glazebrook, of Morristown.

Dr. Glazebrook presented his prepared paper.

President Conaway: The discussion of this paper will be opened by Dr. B. B. Ranson, of Maplewood.

Discussion was closed by Dr. Glazebrook.

President Conaway: The next paper is entitled "Duodenobiliary Drainage; Non-surgical", by Dr. Maurice Asher, of Newark.

Dr. Asher presented his prepared paper.

President Conaway: Gentlemen, I am very happy indeed to introduce Dr. B. B. Vincent Lyon, of Philadelphia, who will open the discussion of Dr. Asher's paper.

Dr. Lyon presented his prepared discussion.

President Conaway: The discussion of this paper will be continued by Dr. Otto Lowy.

Drs. Blackburn, Cohn and Asher continued the discussion.

President Conaway: Gentlemen, I want to announce that shortly after 4 o'clock there will be in the hall about 400 children who have been given the Schick test during the past week. You will have the opportunity, if you so desire, to see the reactions.

I have also received the very encouraging news that the total registration up to this time is 1001, the largest in the history of this Society. (Applause.)

I want to congratulate the Committee on Scientific Program and the Committee on Program and Arrangement for the good work they have done.

Our next paper will be "Study of 250 Gall-Bladder Operations", by Dr. Max Danzis, of Newark.

Dr. Danzis presented his prepared paper.

President Conaway: This paper is now open for discussion. Dr. Ill, will you open the discussion?

Discussion followed by Drs. Ill, Cohn, Gilbride, Finkler and Danzis.

President Conaway: The next paper will be on "Diagnosis and Treatment of Tachycardia", by Dr. Louis Levin, of Trenton.

Dr. Levin presented his prepared paper.

President Conaway: The discussion will be opened by Dr. Harvey M. Ewing, of Newark.

Discussion followed by Drs. Goldstein and Levin.

President Conaway: The final paper of our scientific program is "Severe Hemorrhage from the Stomach, with Special Reference to

Gastrostaxis", and will be read by Dr. Bleukel.

Dr. Bleukel read the paper prepared by Drs. C. A. Pons, Long Branch; B. M. Meine and V. Bleukel.

President Conway: The discussion of this paper is now in order.

Discussion followed by Drs. Goldstein and Pons.

President Conway: Gentlemen, that concludes the scientific program for this meeting.

We would like to have a short session of the House of Delegates.

The meeting adjourned at 4:30 p. m.

SECTION ON OPHTHALMOLOGY, OTOTOLOGY AND RHINOLARYNGOLOGY

Thursday Morning, June 7, 1928

The Section of Ophthalmology, Otology and Rhinology of the Medical Society of New Jersey, held in Room "J" of Haddon Hall Hotel, Atlantic City, New Jersey, convened at 9:45 a. m., Dr. Linn Emerson, of Orange, presiding.

The following papers were presented:

"What Is the Matter with the Tonsil Operation", by Dr. Frederick F. C. Demarest; "The Control of Hemorrhage Following Tonsillectomy. A Method", by Dr. Harry R. North; "Endothermic Tonsillectomy", by Dr. Jack Blumberg.

Chairman Emerson: We will now proceed with the discussion of these 3 papers which have been read this morning. I am not going to call on any man particularly. I presume pretty nearly every man here will want to talk and we have considerable time at our disposal, and unless we run into unreasonable length, I hope that any or all of you will have something to say and will not hesitate to talk on any phase of the subject of the tonsil operation.

Discussion was participated in by Drs. North, Fisher, Wilson, Hubbard, Paglinghi, Rogers, Corwin, Demarest, Tuers, English, Davis, Newcombe, Freeman and Emerson.

Thursday Afternoon, June 7, 1928

The meeting convened at 2:05 p. m., Dr. Linn Emerson presiding.

Chairman Emerson: The first paper this afternoon will be by Dr. Henry B. Orton, "Cancer of the Larynx. A plea for Early Diagnosis".

Dr. Henry B. Orton presented his paper, illustrated by lantern slides and supplemented by a presentation of patients.

Chairman Emerson: This remarkable paper of Dr. Orton's is open for discussion. Is there anybody present who feels that he can say something on this subject? I am sure

Dr. Orton will be glad to answer any questions. I doubt if any of us are competent to really discuss this subject. Dr. Eagleton, will you start it?

Discussion followed by Drs. Eagleton, Fisher and Orton.

Chairman Emerson: The next paper on our program this afternoon is "The Diagnosis and Treatment of Maxillary Sinusitis", by Dr. Charles S. McGivern, of Atlantic City.

Dr. Charles S. McGivern presented his paper.

Discussion followed by Drs. Wilson, Barkhorn, Spiegelglass, Hubbard, Emerson and McGivern.

Dr. Theodore W. Corwin presented his paper on "The Nasal Septum as a Factor in Stenosis".

Chairman Emerson: I understand Dr. Barkhorn will open the discussion of Dr. Corwin's paper.

Discussion followed by Drs. Barkhorn, McGivern and Corwin.

Chairman Emerson: The meeting will stand adjourned until 9:30 tomorrow morning.

The meeting adjourned at 4:35 p. m.

Friday Morning Session, June 8, 1928

The meeting convened at 9:35 o'clock, Dr. Linn Emerson presiding.

Chairman Emerson: The first paper this morning is by Dr. Marsh, of Paterson, on "Illumination and Asthenopia".

Dr. Elias J. Marsh presented his paper.

Chairman Emerson: The discussion of this most interesting paper will be opened by Dr. E. S. Sherman, of Newark.

Dr. E. S. Sherman read his discussion of Dr. Marsh's paper.

Chairman Emerson: The discussion will be continued by Mr. A. L. Powell, of the General Electric Company.

Discussion followed by Drs. Emerson, Gibb, Pilkington and Marsh.

Chairman Emerson: The next paper will be by Dr. Wells P. Eagleton, of Newark, on "Traumatic Lesions of the Head in Relation to the Ophthalmologist".

Dr. Wells P. Eagleton: Mr. Chairman, it has always been my experience, when I come at the end of the program, to feel rather annoyed if I spend a lot of time preparing a paper and then have everything cut short because I happen to be at the end. Therefore, I move you, Mr. Chairman, that the 3 papers of Dr. Gibb, Dr. Wilson, and myself, be discussed together so that the papers can be presented and then that those members who have anything to say about the separate papers should have the time remaining before twelve o'clock to do so.

The motion was regularly seconded and carried.

Dr. Eagleton presented his paper, illustrated by lantern slides.

Chairman Emerson: The next will be a paper by Dr. Norton L. Wilson, of Elizabeth, which is entitled "Interpretation of Visual Fields".

Dr. Norton L. Wilson: Mr. Chairman and Gentlemen: It may seem like carrying coals to Newcastle to get up here and read a paper of this character before ophthalmologists but I had hoped that there would be some general practitioners and men who were just starting in this line present and that it might be of some value to them.

Dr. Wilson presented his paper.

Chairman Emerson: We shall now hear from Dr. Gibb on "Acute Retrobulbar Neuritis Caused by Inflammation of the Sphenoid Sinus. Report of Cases". We can then have the discussion this afternoon.

Dr. W. Blake Gibb presented his paper.

Chairman Emerson: Our section will convene after the meeting of the House of Delegates, probably at about 2:20 p. m., and we will then take up the discussion of the papers which we have heard this morning, followed by our regular program.

The meeting adjourned at 12:20 o'clock.

Friday Afternoon, June 8, 1928

The meeting convened at 2:25 p. m., Dr. Linn Emerson presiding.

Chairman Emerson: Gentlemen, we will first take up the discussion of Dr. Eagleton's paper. As we are all aware, it would be most difficult to discuss his paper. When Dr. Eagleton gets through, he has said all that is to be said.

Discussion of the 3 papers followed by Drs. Sutphen, Wilson, Eagleton, Griesmier, Barkhorn, Emerson and Gibb.

Chairman Emerson: We are now ready to take up our regular program of the afternoon. The first paper is by Dr. E. Blair Sutphen, of Morristown, on the subject of "Operative Intervention in Acute Purulent Otitis Media".

Dr. Sutphen presented his paper.

Chairman Emerson: I shall ask Dr. Barkhorn to read his paper also and have the two discussed together. Dr. Henry C. Barkhorn, of Newark, will read a paper on "Aural Sepsis".

Dr. Barkhorn presented his paper.

Chairman Emerson: I am sure that it is most appropriate that I should ask Dr. Eagleton to open the discussion of this paper.

Others taking part in the discussion were: Drs. Sutphen, Schachter, Fisher and Barkhorn.

Chairman Emerson: Our next paper on the program is "Retinal Disease with Massive Exudation. Report of a Case", by Dr. Willard G. Mengel, of Camden.

Dr. Willard G. Mengel presented his paper, illustrated by lantern slides.

Chairman Emerson: Gentlemen, this very interesting scientific paper is open for discussion. It is very difficult for anyone to discuss a paper of this kind, showing diseases of such rarity. The doctor certainly deserves great credit for the time he has spent in looking up the literature of the subject.

Discussion followed by Drs. Sutphen, Emerson and Mengel.

Chairman Emerson: The last paper on our program is "The Spreading Ulcer of the Cornea", by Dr. D. M. Yazujian, of Trenton.

Dr. Yazujian read his paper.

Chairman Emerson: This very interesting paper is open for general discussion.

Discussion followed by Drs. Pilkington, Gibb, Remer, Mengel, Emerson and Yazujian.

Chairman Emerson: This brings our program to a conclusion, and I must thank all the members who have participated for their attendance and valuable discussion. I hope we may have as good coöperation and as good a section next year.

A rising vote of thanks was extended to Dr. Emerson for his kindly, courteous and efficient conduct of the meetings of the section, and the meeting then adjourned at 5:10 p. m.

(On Thursday afternoon, June 7, 1928, the following officers of the Section on Ophthalmology, Otology and Rhinology were elected: Chairman, Linn Emerson, of Orange; Secretary, James A. Fisher, of Asbury Park. A resolution was adopted requesting the Trustees to continue the plan of section meetings.)

SECTION ON PEDIATRICS

Thursday Morning, June 7, 1928

The Section on Pediatrics of the Medical Society of New Jersey, held in Room "H" of Haddon Hall Hotel, Atlantic City, New Jersey, convened at 10 o'clock, Dr. E. W. Murray, the Chairman, presiding.

Chairman Murray: Now this Section on Pediatrics is a new department for the State Society and I have been talking with the Program Committee and Dr. Conaway, and he feels that we ought to sort of organize for next year; that is, elect a Chairman and a Vice Chairman, perhaps, and a Secretary and Program Committee. What is the idea of the Section on that question? Is it worth while or what shall we do?

Dr. Arthur Stern: I would like to know the status of the Pediatric Society in New Jersey. Is it still in existence with this new departure?

Chairman Murray: The New Jersey State Pediatric Society is still in existence although it is rather quiet. There has been some talk of suggesting to the Board of Trustees that the State Pediatric Society take over a day in the meeting next year. That matter will have to come before the Board of Trustees. There has been nothing definitely decided so far as I know.

Dr. Stern: You mean to have a Chairman from this particular section. That is the plan we follow in the Tuberculosis Association, a Chairman appointed for each particular section, the same as the Medical, Sociological and Pathological, with a Secretary. We have the sectional meetings the same as they are inaugurating here this year. It will be the duty of your Chairman to form your program for next year on the Pediatrics, I should think. That is the way it is worked in our Association.

Chairman Murray: Is there any further discussion?

Dr. Julius Levy: I think the important question to decide is whether we wish to continue as a State Pediatric Society or as a Section. It would be possible, perhaps, to retain the State Pediatric Society and have it act as a Section to conduct a Section Meeting during the session of the State Medical Society. For instance, the State Pediatric Society could hold a meeting one day of the State Meeting. There might be some advantages that way. There are State Pediatric Societies in a number of nearby states that often hold joint meetings. I think it is a matter that ought to receive a bit of consideration before we proceed immediately to adopt the idea of a Section of Pediatrics, rather than retain

the idea of a State Pediatric Society which will conduct its sessions on one day of the State Meeting.

From a practical standpoint it would serve the same purpose as from the State Medical Society viewpoint, but there might be some advantages for the pediatricians in retaining the status of the State Pediatric Society. Perhaps it would be desirable to appoint a committee to consider the matter and confer with the officers of the State Medical Society in regard to it.

I wonder if Dr. Albee would be willing to offer some suggestion on the matter. He has had a lot of experience.

Dr. George C. Albee: The only suggestion, the only idea I have, which bears on the subject is that we had a considerable amount of difficulty a year ago in getting a large group of men together, pediatricians at least. We planned, you remember, to go to the various districts and have a short meeting, perhaps a clinic in the morning and a short group of talks in the afternoon. We couldn't get away with it. There wasn't enough interest shown. It impressed me very much that the interest in the Pediatric Society couldn't be great enough to continue as an organization. I like the idea of a group, of a section, in the State Medical Society because there we will have our papers and will get together, and I think it is going to be a stronger thing for us than if we try to continue as the State Pediatric Society.

Chairman Murray: Is there any further discussion?

Dr. Marcus W. Newcombe: Why wouldn't it be a good idea to nominate a committee to handle this Section and take up the question with the State Pediatric Society? I will make a motion that a committee of three be appointed.

Chairman Murray: That a committee of 3 be appointed as a Conference Committee to take up the question of the advisability of discontinuation of the State Pediatric Society on amalgamation with the Section?

Dr. Newcombe: Yes.

The motion was seconded.

Chairman Murray: Is there any discussion?

Dr. F. C. Johnson: Might that Committee not be instructed to act as a Program Committee or see to it that a program is prepared at the next meeting or by the Section, unless that Committee could settle the matter today and report again tomorrow, if that is the idea. But if it is a committee going on through the year it will probably end in a conference with nothing done more than was done this

year, which may be perfectly satisfactory. If they were instructed to act in preparing the program in some way it might be of advantage to have one committee.

Chairman Murray: Is there anything further?

Dr. Rogers: It would seem to me it would be a very good plan to keep your old Pediatric Society; don't give up the name; continue to use it as a nucleus to carry on this work, to arrange our program. That would be my thought in the matter—continue on with your Pediatric Society, arrange your program from year to year, but have it meet on one of the regular days of the regular State Society meeting.

Chairman Murray: Is there any further discussion? Is it the consensus of opinion that it is a wise plan to continue the State Pediatric Society as a nucleus with the consent of the Board of Trustees and call that a section of the Medical Society? Is that the idea?

Dr. Rogers: That is my idea. I am putting it up to find out what the idea of the rest is.

Dr. Stokes: I think it would be well to let this Committee, as there is a motion on the floor, decide that question.

Chairman Murray: I think the Committee would like to have the thought of the members present.

Dr. Levy: Don't you think from a practical standpoint it would be wise for the next year to let the State Pediatric Society conduct the next meeting; then if at the next meeting everything works out well and the State Society presents reasons for conducting it as a Section rather than as a separate Society, we could then decide to disband the State Pediatric Society and become a Section of the State Society; but it seems unwise at this early time to give up something that at least has tradition before something else has been firmly established. It would not prejudice the idea of the State Medical Society. We could conduct our next meeting the same as this is going to be conducted, on a day of the program of the State Society and at that meeting decide which way the thing should be continued.

Chairman Murray: Is there any further discussion?

Dr. F. I. Krauss: I think that suggestion of Dr. Levy is very wise. I presume this Section was on that same basis and those officers can carry on for another year and work it out.

It seems to me, Mr. Chairman, there is a feeling that the State Pediatric Society has functioned. This move doesn't involve dis-

solving the Pediatric Society at all. It is a question of meeting the new possibility of developing pediatrics as a subject with the State Society. History shows there was a field for a separate association. We had big meetings; educational interests assembled with us. That died out a little and we find that meetings with only a few specialists and pediatricians made too small an organization. We found it desirable to have this meeting in conjunction with the State Society. This is the next step in the development in which such a program becomes a part of the program of the State Society, to have coincident Sections on different subjects. It is going to add very much to our facilities for an audience at a Pediatrics Section. I should say it should be the idea of the Committee to develop the opportunities to have an audience for pediatrics on the program of the State Society.

Chairman Murray: Is there any further discussion?

The motion was put to a vote and carried.

Chairman Murray: I will appoint that Committee before the meeting adjourns.

Now, the hour is late and we will start our program. The subject of our first paper is "Value of Acidified Milk in Infant Feeding".
Dr. F. I. Krauss.

Dr. F. I. Krauss: I would like to talk a few moments about acidified milk in infant feeding, and I hope you will give me a free discussion.

Dr. Kraus read his prepared paper.

Chairman Murray: This very interesting paper is before you for discussion. I will call on Dr. Stern.

Dr. Stern opened the discussion which was participated in by Drs. Miller, F. C. Johnson, J. O. McDonald, Julius Levy, and closed by Dr. Krauss.

Chairman Murray: The next paper on our program is, "Our Annual Winter Infections of the Respiratory Tract in Childhood". Dr. Stern.

Dr. Stern read his prepared paper.

The discussion was opened by Dr. Levy, continued by Drs. Kraus, Stokes, Reiner and Silver, and closed by Dr. Stern.

Chairman Murray: The next paper is "Diagnosis and Treatment of Congenital Syphilis", by Dr. A. J. Casselman.

Dr. Casselman read his prepared paper, which was discussed by Dr. Miller, Dr. Casselman closing.

Chairman Murray: The next paper on the morning's program is "Treatment of Anemia in Infancy and Childhood," by Dr. J. O. McDonald.

Dr. J. O. McDonald: For a long time when

I have been annoyed. I have had the habit of making remarks and seeing if I couldn't learn. I have come to you in exactly that spirit. The problem of anemia and malnutrition in children that are brought to me has been a real problem. The ages that I refer to run practically from 1 to 3 years.

Dr. McDonald read his prepared paper.

Chairman Murray: Will Dr. Julius Levy open the discussion?

Dr. Levy was followed by Drs. Kraus, Hummel, Minningham and McDonald.

Chairman Murray: I wish to appoint the Committee—Dr. Levy, Dr. Hummel and Dr. Stokes. Will you please report at the opening of the next session?

Dr. Stokes: I wonder if I could be relieved? I have to leave right after lunch.

Chairman Murray: I thought you discussed the question. Is Dr. Rogers here? We will ask Dr. Rogers to act as the other member of that committee.

The meeting adjourned at 12:30 p. m.

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Thursday Afternoon, June 7, 1928

The meeting convened at 2:30 p. m. Dr. Murray presiding.

Chairman Murray: We will listen to the report of the committee appointed this morning.

Dr. Julius Levy: The committee appointed this morning by the Chairman met after the session and decided to recommend to the State Society that the State Pediatric Society should conduct the Pediatric Meeting next year on a somewhat similar plan as this meeting this year. It should be a meeting of the State Pediatric Society, but the program should be issued through the State Journal and considered a part of the Pediatric activities of the State Society.

Dr. Conaway was present and that idea seemed entirely agreeable to him. Since the meeting of the committee he has talked with Dr. Reik who raised several questions regarding that proceeding. He first raised the point that by that method not every member of the State Society would have the right to contribute to the meeting because as a State Pediatric Society they would have to be elected as members of the Society in addition to being members of the State Medical Society, but if conducted as a section, any member of the State Society who registered would have a right to contribute a paper.

I think he is disposed to feel there are some objections to our proceeding. On the other hand, he pointed out perhaps it would be wise to let the section continue for another

year without any intent on the part of the State Pediatric Society to change its own status. I want to mention this latter idea to you so you will consider it in deciding about the report of the committee.

Chairman Murray: The report of this committee is before you. What is your pleasure? Shall the report of the committee be adopted or not?

Dr. F. I. Krauss: As I understand it, Doctor, the committee doesn't recommend one way or the other.

Dr. Levy: The committee wishes to recommend that the State Pediatric Society should continue as such, that it should ask the State Medical Society for the right to conduct its meeting during the session of the State Medical Society. Perhaps I ought to explain that in former years the State Medical Society objected to the State Pediatric Society conducting its meeting during the session of the State Medical Society on the theory that it would conflict. They would then consider the meeting of the State Pediatric Society to be the Pediatric Section of the State Medical Society. We would serve their purpose of allowing those interested in Pediatrics to hold their special meeting and also agree with some of the ideas of the men who feel it is desirable as a State Pediatric Society. If you have a State Pediatric Society you would make probably certain conditions. The men would have to unite and say that as a Pediatric Section, any member of the State Society is eligible and can consider himself a part of the Pediatric Section, he wouldn't be part of the State Pediatric Society unless you made a recommendation that anyone may be a member, which would destroy the primary purpose of the Pediatric Society.

Chairman Murray: What is your pleasure?

Dr. Krauss: I would move that the report of the committee be accepted, that we continue for another year as the Pediatric Society and ask the privilege of conducting our section one day next year.

The motion was seconded, put to a vote and carried.

Chairman Murray: The first paper on our program this afternoon is "Experiences in Use of Antitoxin in Scarlet Fever," by Dr. Edwin H. Place, Assistant Professor Pediatrics, Harvard Medical School. (Applause.)

Dr. Place presented his prepared paper. (Applause)

Chairman Murray: I will ask Dr. Ellis E. Smith, Medical Director Essex County Isolation Hospital, to open the discussion.

Dr. Smith was followed by Mr. F. J. Osborne, Health Officer of East Orange, New

Jersey; Dr. G. F. Leonard, Assistant Medical Director of Squibbs' Laboratories; Drs. Levy and Place.

Chairman Murray: The next paper is "Experience With Biologicals in Treatment of Pneumonia", Dr. Russell L. Cecil, Assistant Professor Clinical Medicine, Cornell University.

Discussion of Dr. Cecil's paper was opened by Dr. Albert E. Roussel, Professor of Medicine, Graduate School of the University of Pennsylvania, after which several questions were informally asked and answered.

Chairman Murray: I think a motion of appreciation is in order for these two excellent papers that have been read.

Dr. Levy: I move we express our appreciation by a rising vote of thanks.

The motion was seconded, and the members arose and applauded.

The meeting adjourned at 5 p. m.

Friday Morning, June 8, 1928

The meeting convened at 10:15 a. m., Dr. E. G. Hummel of Camden, N. J., presiding.

Chairman Hummel: I am very sorry Dr. Murray will not be able to be here this morning. We will now open the Pediatrics Section.

We are sorry that Dr. Wherry has not yet arrived. We don't know whether he will be here later or not. We will take the next paper on the program this morning. Dr. Harry B. Silver will present his paper on "Thymic Enlargement".

Dr. Silver presented his prepared paper, illustrating with slides. (Applause.)

Drs. London, Miller, Krauss, Johnson and Hyman took part in the discussion.

Chairman Hummel: The next paper on the program is "Splenectomy for Hemorrhagic Purpura of Childhood", by Dr. Walter Blair Stewart of Atlantic City.

Dr. Stewart read his prepared paper which was discussed by Drs. Silver and Johnson.

Chairman Hummel: This completes the entire program for this morning. I think we all feel very well paid for coming and I hope you will all be back again this afternoon because we have a very good program, it seems to me, lined up for the afternoon.

The meeting adjourned at 11:30 a. m.

Friday Afternoon, June 8, 1928

The meeting convened at 2:30 p. m., Dr. Hummel presiding.

Chairman Hummel: We have heard indi-

rectly from Dr. Wherry. He has a severe cold, and will not be with us.

The first thing on the program this afternoon is the paper of Dr. C. P. Lummis, "Simplified Infant Feeding in Health and Disease".

Dr. Lummis read his prepared paper which was discussed by Drs. London and Silver, Dr. Lummis closing.

Chairman Hummel: The next paper on the program is "Pyuria—A Pediatric View", by Dr. Frank C. Johnson.

Dr. Johnson: I should like to express this as a pediatric view, not perhaps, the generally accepted view.

Dr. Johnson read his prepared paper.

Chairman Hummel: Dr. Johnson's paper is open for discussion.

Dr. Marcus, London and Nichols joined in the discussion.

Chairman Hummel: The next paper on the program is "Trials and Tribulations of the Newborn", by Dr. Joseph H. Marcus.

Dr. Marcus: Ladies and Gentlemen: In selecting this subject, it was impossible to include all the trials and so-called tribulations of the newborn because I would in all probability have you here for six or eight hours and we don't want to stay that long. So I have been inclined to touch upon the more important elements which we come in contact with from a general standpoint.

Dr. Marcus read his prepared paper, which was discussed by Drs. Silver, Nichols and Johnson, Dr. Marcus closing.

Chairman Hummel: Dr. Stanley Nichols of Long Branch will read a paper on "Simplified Diagnosis of Heart Murmurs in Children."

Dr. Nichols: Since the doctor mentioned the heart, we might begin our paper by saying probably the baby was crying when he listened to that murmur and didn't hear it.

Dr. Nichols read his prepared paper which was illustrated with charts. Discussion by Dr. Marcus followed.

Dr. F. C. Johnson: Dr. Hummel, before the meeting is dismissed, I wonder if I might express a few sentences about this group which we have enjoyed—I think most of us have. Perhaps some of us have talked too much this year.

For the first time since the last meeting of the New Jersey Pediatric Society, there has been a meeting with the State Society and it has apparently been quite a success. We had a motion to appoint a committee to investigate the carrying forward of the plan and I wish that we as a group here might be very sure to register our desire that it be not allowed to die in committee. If it is not, that the President at each meeting be supplied with a gavel and

a stop watch which he use at the before-decided time limits, giving a warning period to each speaker, and for discussion a relatively short period, and stop on time; that the readers of papers secure beforehand some one person to discuss the subject and he be cut short at a suitable time also.

It is very hard to keep a group of people who are passively interested in one or two subjects on a program, sitting through several other numbers which may or may not drag out and in which they are not interested. I think it would be very valuable if parliamentary procedure were carried out.

Chairman Hummel: I think your suggestion is very timely, and just the thing we like to hear. The Committee did meet and as we are meeting at this time in the capacity of a Section of the New Jersey State Medical Society, we hope next year to meet with the State Society in the capacity of the New Jersey State Pediatric Association. It is suggested that we call another meeting of the New Jersey State Pediatric Society to conduct such business as the election of officers,

committees, and other things that may seem fit at that meeting, to line up our program for our next meeting which will be at the same time as the New Jersey State. It will probably be on the second day and the program will be connected with the program of the State Society, but we will still hold ours as the New Jersey State Pediatric, not a section.

I happen to be one of that Committee and will still bear it in mind without fail and remind those who are also interested that we have another meeting, and I hope you will all respond. At the last Pediatric Meeting we had in Newark three years ago, I was the only one from South Jersey who attended. Let's all get together and have a real meeting some time in the near future and start this ball rolling, and have a very active State Pediatric Society.

I am very glad you took this time and opportunity to make these remarks, Dr. Johnson.

You will all probably get some notice of this meeting and I hope you will all come out and make it a real, live affair.

The meeting adjourned at 4:45 p. m.

SPECIAL MEETING

Secretaries and Reporters County Medical Societies

Haddon Hall, Atlantic City, June 7, 1928

Accepting an invitation of Dr. Walt P. Conaway, President of the Medical Society of New Jersey, the Secretaries and Reporters of the Component County Medical Societies met, as guests of the President, at luncheon in the private dining room of Haddon Hall at 12:30 p. m.

The following named officials responded in person: Atlantic County, Harold S. Davidson and Jos. H. Marcus; Bergen, Spencer T. Snedecor; Camden, R. E. Schall; Cape May, Eugene Way; Cumberland, E. C. Lyon and E. S. Corson; Essex, F. W. Pinneo; Gloucester, Ralph K. Hollinshed and Henry B. Diverly; Hudson, Harry J. Perlberg and M. I. Marshak; Mercer, A. Dunbar Hutchinson; Morris, Marcus A. Curry; Salem, Wm. H. James; Union, George W. H. Horre and Russell A. Shirrefs; Warren, L. Cook Osmon and F. A. Shimer.

In addition, First Vice-President Ephraim R. Mulford, Recording Secretary J. B. Morrison and Executive Secretary Henry O. Reik were present.

After enjoyment of a very delightful lunch, Dr. Conaway expressed his appreciation of the services rendered throughout his administration by the Secretaries and Reporters, and then introduced Dr. Frank C. Hammond, of Philadelphia, Editor of the Atlantic Medical Journal who delivered the following address:

THE CONDUCT AND IMPORTANCE OF A COUNTY MEDICAL SOCIETY

Frank C. Hammond, M. D., F. A. C. S.,
 Editor The Atlantic Medical Journal,
 Philadelphia, Pa.

As the success of medical organization depends largely on the activities of county society secretaries, an annual conference is materially helpful in bringing about a better understanding as to what county secretaries can do in developing a greater interest in organization.

The State Medical Society meets once a year to consider questions of general professional interest and the reading and discussion of formal papers. The secretary of the State

Medical Society has accomplished much in creating a greater interest in the work of the House of Delegates. But, beyond the House of Delegates is the county medical society, and the highly responsible secretary, who does or should keep the county society informed as to the activities of the state and national associations. If the secretary fails, the society fails.

It appears to be a fact that too often county societies do not consider adequately who should be secretary of the society. Proper attention is not given to his fitness. We do not for one moment doubt the ability of every member of the local society to fill the office of secretary, but, is he willing to give the time to function as the leader of the local profession? When such a member is willing to make the sacrifice, he should be continued in office.

Being elected a secretary is not an idle honor. The acceptance of the office implies that the incumbent is to assume all the duties that pertain to the office, and that he is willing to contribute much time, sustained effort and continued thought, in order that he may properly acquit himself of the definite responsibility that he has assumed. If he is unwilling to make such contribution, it will be far better for himself and for the members to step aside and let someone else take his place. Secretaries are not and must not be figureheads. They should be leaders and directors of organized medical activity in their respective counties. They must think, live and act society work day and night, during their entire term of office. It is theirs to plan, to inaugurate, to direct activity, and to enlist and hold the support of all the members. They must inspire, interest and cooperate, while at the same time setting a worthy example. There is certain work that should be delegated to individuals and committees. Concern yourself with supervising and stimulating committee accomplishments. To retain close contact with your committees means achievement of results.

The activities of a county medical society are numerous. Its objects are to promote the progress of medicine; to promote harmony among physicians; to teach modern medicine to its members; it affords a place where a member may become acquainted with his colleagues, and where friendships are made and maintained; its members should be shown their civic duties and privileges, for every physician owes something to the community that supports him; it is the place where physicians meet each other on an equality, and bear their share in promoting the high calling of their profession.

A very important propaganda is selling the county society to the membership and to prospects. It is surprising the number of physicians eligible for membership in their respective county societies, who are not enrolled.

Good salesmanship depends largely on three factors: (1) Having a good article to sell. (2) Having the ability to sell it. (3) Having confidence in the proposition. It would be interesting to know how many prospects in your state are eligible for membership, who are not now on the membership roll. Some states have worked this out. We are now making a survey in Pennsylvania. Our plan is as follows: At our State Society headquarters at Harrisburg, the American Medical Association Directory was used, to make up a series of cards containing the names and addresses of the doctors in the various counties, whose names do not appear on the membership list for the respective counties. These cards were sent to the secretaries of the county societies with the request that they be returned with a notation as to whether or not the non-member would be considered eligible for membership. The secretaries were requested to include in their returns the names of non-members that did not appear on the cards sent to them. In this way the officers of the county societies are being stirred to action. As the return cards are being received, copies of the State Journal are being sent to the non-members considered eligible, as a further plan to interest them in making application for membership.

Before starting out on a selling campaign it is essential first to sell the membership, and to educate them as to what you really have to offer. This, too, will enable them to answer the queries that we so often hear as to the benefits gained through membership. You should tabulate the many benefits that accrue, in order that your members may be properly instructed. Through the different attitude of the laity toward the medical profession today, medical society membership is a necessity to the man in practice as never before.

When we realize what is gained by membership in our county, state and national associations, the question that stands out most prominently is, "Why do not all practitioners in our counties, who are eligible, but non-members, affiliate with the local society?" This is a problem for the county society to solve. Invite the non-members to the meetings. Show them what you are doing for yourselves and the community. Every county medical society should have a membership committee, and have at least one member in-

interview each eligible physician who is not a member.

An ideal county society organization has been briefly described as follows: "It should have a good membership in proportion to the number of eligible practitioners, should have relatively frequent meetings, with a good average attendance, good programs at each meeting which will be of interest to all the membership, should be recognized as a factor for good in the community and be properly organized so that all health matters for discussion in the community and everything for the betterment of health conditions be done under their own supervision."

Keeping these things in mind, and by making an intensive drive, it ought not to be a difficult feat to get every non-member who is eligible, to become a member.

Medical society politics are always of interest, and at times there is evidence of considerable animus at the time of election of officers. Regardless for the moment of the cause of any controversy, it should be remembered that nothing stimulates interest in an organization more than differences of opinion. Every medical society should have within its membership ample evidence of differences of opinion. These differences should not be limited to technic, or methods of treatment but differences of opinion should exist concerning the ordinary affairs of daily life, including the conduct of medical organization. Not infrequently the officers of medical societies adopt a superior viewpoint, which elevates them in their own minds above the very group who have elected them to office. The right to protest belongs to every member of a society, and it is a right which should be exercised by thinking men.

If the medical societies actually devoted time and thought publicly, to the consideration of the numerous problems which beset their membership, there would be less ground for suspicions, for doubt of sincerity, and for feeling the inadequacy of the county organization.

The members of a county medical society are, after all, more important than their officers, whether they are in agreement or disagreement. Medical harmony may lead to stagnation. A little difference of opinion now and then is an encouraging sign, and can be utilized to the advantage of professional talking and thinking.

A secretary's job is no snap. The secretary of the county medical society gets more abuse than any other medical man in his immediate community. What he should have is the cordial cooperation and support of every

medical man in his county, to the end that the county medical society will be as good as it may be made.

In the April number of the American Medical Association Bulletin you will find a very interesting article on The County Medical Society, by Dr. Olin West, secretary and general manager of the American Medical Association.

How the component county secretaries can assist the editor of the state journal: The various state journals are official organs of the respective state medical societies. They have taken the place of bound annual transactions, and have proved far superior as a means of preserving the annual proceedings, reports and general affairs of each state organization. They faithfully record the work of each society, giving full reports of meetings, papers read by members, discussions, etc. of interest to the members taking part therein. These society organs, unlike the former bound volumes, take advertising, which helps to defray costs and permits much better service in keeping members posted on organization affairs. A copy is supplied to each member, and a certain portion of his annual dues is apportioned as subscription to the official organ. The editor and publication committee are elected from year to year.

The members of a county medical society need to be informed regarding the activities of the society and its committees. They gain this information principally by attendance at the meetings, but partly by meager reports in the daily newspapers, and to a slight degree by word of mouth. None of these methods record the information in permanent form.

The officers of the component county medical societies depend to a certain extent upon the publications of their respective county societies. The central staff of the state society journal is expected to keep itself informed of the plans and methods of work of the various county medical societies, to be able to advise how to promote the interests of the societies and their members, and how to enable the medical profession to fulfill its duty to the public, and to carry information from one society to another, in order to weld the members into a great medical fraternity for mutual help and inspiration.

The county society secretary is the liaison officer between the editor and the members. It is to him the journal office must look to carry messages from the editor to the county society and vice versa.

The names of all officers of the county society should be sent to the journal office as soon as they are elected. Several months

should not be allowed to elapse before this information is received.

The county society reports can be made a very interesting and most valuable portion of the Journal. In a number of instances the secretary is also the county society reporter. Where he is not, he can assist the reporter to prepare his reports by passing on to him society news in advance, and making such suggestions as will make his reports more interesting. In cases where the secretary is also the reporter, the following suggestions will be worth considering:

(1) To be of value, the county society reports must be read. To be read, they must be interesting. To this end, they should not be a mere record of meetings held, with the dates, the members present, and the titles of papers read. On the contrary, abstracts of papers and discussions should be routine. They should contain accounts of interesting activities in the counties, reports of public health meetings held and propaganda put across, actual accomplishments in sanitation, in Schick-testing, in smallpox vaccination, accounts of particularly interesting cases of epidemics and how they were handled, and abstracts of the most interesting papers and discussions read at meetings. In a word, the reports should reflect all the worth-while activities of the society and its members, told in such an interesting manner as to make the county society department of the journal the most popular department.

(2) These reports should be well and carefully written and edited before sending them in. You may well imagine the despair of the editor on receiving, during the last-minute rush in getting out the Journal, a badly phrased report, written in lead pencil, of a meeting held perhaps two months before. Yet this is precisely what happens month after month. In fact, the greater part of all county society reports have to be completely rewritten, and instances are on record where entire papers were sent in for the editor to abstract. You readily can understand that we cannot afford the time to do this kind of work. The staff on duty in the office is too small to handle it, however willing.

(3) The reports should be typewritten, double-spaced, and on one side of the paper; and should be correct from the standpoint of spelling, grammar, rhetoric, etc. Leave plenty of margin on both sides. Before making the final copy, look up the proper form in the last Journal. It will save the editorial office a lot of time. Take pains to construct carefully, and write interestingly. *Send in reports immediately after your meetings. Don't wait until the news is stale.* Do not

clip your reports from the newspapers. It will pay to take the time to write them yourself. If you don't, the editor must.

If one may judge by the many members who have been heard to remark that they always turn to the "News Items" first, this department is an important one, and worth developing. It ought to contain notices of all deaths, engagements, marriages, births, and other items of interest to the profession of the state. The editor has very little assistance in gathering these items. They are culled largely from the few newspapers that the office has time to peruse, and from county society bulletins.

Obviously, the news column could be greatly improved if all county society secretaries, particularly in those counties which do not publish a bulletin, would contribute. Jot down the personal news that comes to your attention, and clip items of interest from your local papers. Slip them into an envelope with your name, and send them to the journal office before the twentieth of each month. It will help to make your journal vastly more interesting.

Owing to the limitations of space, the editor may not always be able to accept voluntary papers, but it is worth while to give the journal an opportunity to publish the best literary output of your organization. Short reports of especially interesting cases are also very valuable, and the secretaries can assist by soliciting these when such cases come to their attention.

It is not always possible for the editor to be in touch with the latest developments in all the counties. Doubtless many things occur which should receive editorial comment. The secretaries can assist him greatly by sending in the facts regarding such events, or even at times by providing short editorials on the subjects.

Prompt replies to inquiries from the journal office are a notable aid to the editor. Nothing is so trying as waiting for information which does not come.

Owing to the county society bulletins, which largely carry the local advertising, and to the Journal of the American Medical Association, which appeals to the national advertisers, it is quite difficult to secure an adequate advertising representation in the state journal. The secretaries can assist more than they have any idea, by keeping the office informed as to new and acceptable advertising prospects which appear in their respective counties, and also by inquiry of the detail men who visit their offices as to why their firms do not advertise. Increasing the income from adver-

tising reduces the cost of the journal to the members, and makes possible expansion of its pages.

Notify the office promptly of all changes in address. Members so frequently forget to notify the office when they move.

In short: keep the editor in touch with the happenings in your county, and he, in return, will keep you informed about the activities of others inside and outside of the state. Co-operation is a tremendous force. Let it be your keynote, and your Journal will develop on a scale otherwise impossible.

Dr. Hammond's address was received with much enthusiasm and several secretaries took advantage of the opportunity to thank him for suggestions presented and to discuss different features of his paper.

As the President had been called away to open the afternoon session of the State Society, Dr. Reik extended to Dr. Hammond the thanks of Dr. Conaway and his guests for coming to the luncheon and for delivering

such an admirable address, so full of sound advice.

Before adjourning, Dr. A. Dunbar Hutchinson, on behalf of the County Society Secretaries and Reporters, offered the following resolution:

"In a gathering of the Components of the Medical Society of New Jersey great satisfaction results from the knowledge of work well done. In recognition of the exacting responsibilities assumed by Secretaries and Reporters in the performance of arduous duties, the President of the State Society has emphasized his appreciation of such services by inviting these scribes to a conference and to partake of his hospitality. In acknowledgment of his splendid tribute to us, be it Resolved: That the Secretaries and Reporters make public expression of their appreciation of his interest in their work, and thanks for the enjoyment of his hospitality."

This motion was unanimously adopted, and the meeting adjourned.

WOMAN'S AUXILIARY
to the
MEDICAL SOCIETY OF NEW JERSEY
Second Annual Meeting, Hotel Chalfonte, Atlantic City

Wednesday, June 6, 1928.

The executive officers of the State Society Auxiliary and the presidents of county auxiliaries met at dinner in the Hotel Chalfonte, with a representation of 16 present. After enjoying a very delicious dinner, while a splendid "get-together" spirit prevailed, the President, Mrs. A. Haines Lippincott, called the meeting to order and explained the general plan of meetings and entertainments as set forth in the official program. She expressed the hope that this dinner be accepted as a precedent to be followed in successive years.

The minutes of the meeting of the Executive Board, held in Trenton, January 30, 1927, were read and approved.

Roll call was answered by Mrs. A. Haines Lippincott, Mrs. George L. Orton, Mrs. E. R. Mulford, Mrs. James Hunter, Jr., Mrs. R. L. Ballinger, Mrs. R. M. A. Davis, Mrs. Theodor Teimer and Mrs. George Rogers, of the officials; and Mrs. W. Wayne Babcock, Philadelphia; Mrs. Renner, of Somerset; Mrs. Tuers, of Passaic; Mrs. Culver, of Hudson;

Mrs. Kinch, of Union; Mrs. Bloom, of Warren; Mrs. Remer, of Burlington; Mrs. McMahon, of Morris, and Mrs. Massey, of Atlantic counties.

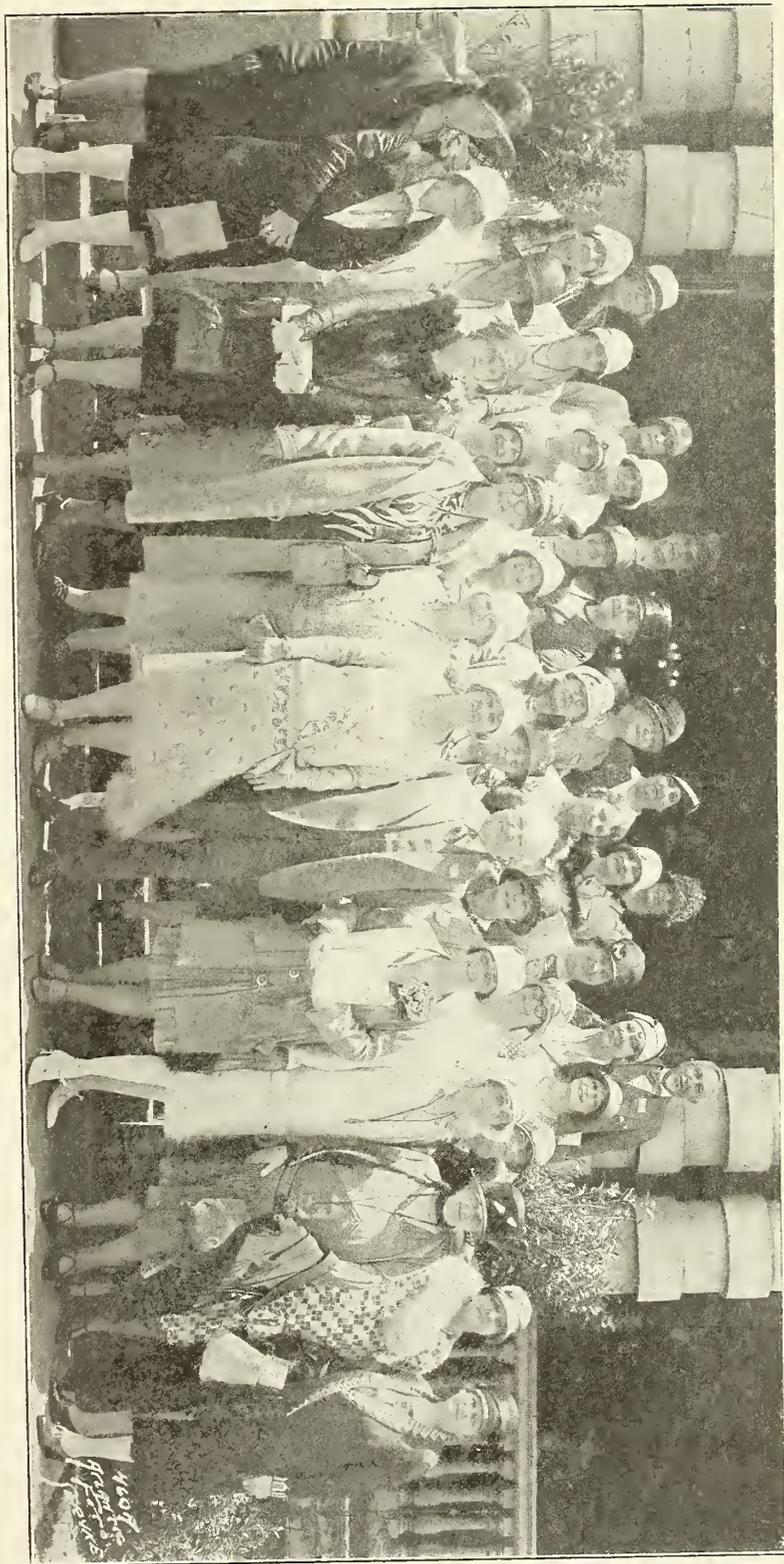
Upon motion of Mrs. Rogers, seconded by Mrs. Hunter, it was decided that Mrs. Ballinger and Mrs. Teimer should serve for term of 2 years as Directors; Mrs. Gray and Mrs. McCormack for the 1 year term, and that the 2 new Directors to be elected should serve for 3 years.

Mrs. Mulford moved that the Executive Board recommend to the State Auxiliary that an Advisory Board, or Council, be constituted of the Past-Presidents, and that this be made an amendment to the Constitution.

The motion was seconded by Mrs. Rogers and adopted.

Upon motion of Mrs. Teimer, seconded by Mrs. Ballinger, it was determined that Delegates from county auxiliaries that had not paid dues would be welcomed to meetings but would not be accorded privilege of voting.

Upon motion of Mrs. Mulford, seconded



Officers and Delegates to the Second Annual Meeting of the Woman's Auxiliary to the Medical Society of New Jersey, held June 6-9, 1928, at the Chalfonte Hotel, Atlantic City, New Jersey

by Mrs. Hunter, Mrs. Lippincott was authorized to negotiate with the National Auxiliary regarding adjustment of the fiscal year to the convenience of state and county auxiliaries.

Upon motion of Mrs. Mulford, seconded by Mrs. Tiemer it was recommended to county auxiliaries that, where necessary, they should amend their By-Laws to provide for election to membership of the widows of physicians who had been in good standing in their respective county societies.

The meeting then adjourned.

Cora Massey,
Secretary.

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Thursday, June 7, 1928, 10 a. m.

The Second Annual Meeting of the Women's Auxiliary to the Medical Society of New Jersey met at Haddon Hall, Atlantic City, N. J., on Thursday, June 7, 1928, with the President, Mrs. A. Haines Lippincott (of Camden), in the chair. Meeting was called to order at 10:15 a. m. The Secretary, Mrs. A. Longstreet Stillwell (Somerset), called roll of County Societies—delegates responding from 16 counties—5 not represented.

Atlantic, 6 Delegates and Alternates—Membership 27—Possible 116.

Bergen, 5 representatives, 37 members—Possible 111.

Burlington, 3 Delegates and Alternates—Membership 40—Possible 41.

Camden, 4 Delegates and Alternates—Membership 40—Possible 114.

Cape May, 4 Delegates and Alternates—Membership 14—Possible 20.

Gloucester, 5 Delegates and Alternates—Membership 26—Possible 29.

Essex, 3 Delegates—Membership 173—Possible 568.

Hudson, 4 Delegates and Alternates—Membership 50—Possible 371.

Mercer, 3 Delegates—Membership 28—Possible 133.

Middlesex, 3 Delegates—Membership 92—Possible 105.

Morris, 1 Delegate—Membership 13—Possible 62.

Ocean, 4 Delegates—Membership 13—Possible 16.

Passaic, 4 Members and Alternates—Membership 52—Possible 181.

Salem, 1 Delegate—Membership (?).

Somerset, 4 Delegates and Members—Membership 19—Possible 32.

Union, 3 Delegates—Membership 40—Possible 161.

Warren, 1 Delegate—Membership 27.

Sussex, Membership 20.

Minutes of 1927 Convention were read and

approved. President appointed the following named as a Nominating Committee: Mrs. Haldeman (Burlington), Mrs. Underwood (Gloucester), Mrs. Hubbard (Union), Mrs. Devlin (Essex), Mrs. McMahon (Morris).

Treasurer's report called for; on motion of Mrs. Rogers, it was voted that it be deferred until the following day—carried.

Addresses by National Officers were next in order. Mrs. Southgate Lee of Norfolk, Va., unable to be present, sent greetings. Mrs. J. O. McReynolds of Texas, National President, sent night letter—prevented from being present by illness. Sent regrets, and congratulations to New Jersey Auxiliary and suggestions for future work.

Mrs. W. Wayne Babcock, of Philadelphia, National Organizing Chairman, was next presented and received with enthusiasm. She reported 30 states organized to date and offered no "National Program"—each state can best work out its own. She counseled the members to study local conditions and thus learn where to assist. Leaders in Medicine are urging "Preventive Medicine" and the Woman's Auxiliary can help along this line. She stressed the futility of being discouraged by slow growth and apparent lack of accomplishment; also urged the women of the Auxiliaries to get on Boards of Women's Clubs even if not active in their work.

Here is a source of power for the Auxiliary, as in this way can be spread knowledge of health problems and much incorrect information can be straightened out. She emphasized the place the widows of physicians have in a medical auxiliary both from the standpoint of the great interest they would bring to such work, and also the help it would be to them.

The audience was told of the fact that through the women, Missouri, after two years of their work, was put into the birth registration area, the physicians having been working for the same end for 8 years.

Another piece of work most worthy of accomplishment has been largely contributed to by the Philadelphia County Auxiliary in Pennsylvania. That is the establishment of a fund for doctors in great need, or doctors' families left in hardship by the death of the father. In these cases the matter is so managed that no one but the few trustees of the fund know who the beneficiaries are. Thus is made possible the education of the children who as they grow up can return to the fund the loan made to them. Auxiliary members were urged to study local conditions and thus learn to assist.

Mrs. Babcock says that the time of organizing is over, now is the time to test the strength that lies in the organization.

Dr. Walt P. Conaway, President of the

Medical Society of New Jersey, honored the Auxiliary by his presence and delivered the following address:

ADDRESS BY PRESIDENT WALT P. CONAWAY

Members of the Woman's Auxiliary: It was not so many years ago that men felt they only were qualified and capable to discuss the affairs of state as well as various health problems, but that day has passed and now women in many communities are taking an active part in the administration of our Government affairs, state, national, and local, as well as being very much interested in research work, science, and many of the professions. I believe the word "obey" has been omitted from the marriage vows—proof positive that woman has assumed her rightful place not only as a helpmate but as a counselor.

As you probably know, the idea of a Woman's Auxiliary to the medical profession was first mentioned by a woman from Texas. She wisely thought that the wives and daughters of physicians could and should be of material help in solving many of the health problems in their respective communities. For a general definition of the purpose of the Woman's Auxiliary, I can not do better than to quote from Mrs. John O. McReynolds, Ex-President of the Woman's Auxiliary of the American Medical Association: "It is what its name implies—a reserve force, an aid, a group of conscientious physicians' wives organized for the purpose of responding to the call of the medical profession. While our husbands are wrestling with purely scientific problems, we are playing our humble part in the drama of their life's work, our function being to assist in lightening the burdens of humanity by helping to preserve the health of the people and by training the public as far as we can to a higher appreciation of the medical profession."

The specific work that each auxiliary should do depends, of course, in a large measure upon the needs of the county or state in which it is situated. It has been uniformly noted that there is more interest and enthusiasm, and a greater spirit of comradeship among the members of the County Medical Society if there is an active auxiliary working in the community.

The work of a county auxiliary may be divided into 3 groups: social, philanthropic, and educational, and each group might be headed by a Vice-President. Your auxiliary should meet regularly as often as the county medical society meets and should make reports and recommendations of your work from time to time. In addition to the committee reports at the meetings some auxiliaries provide for a paper to be read or a speaker to address

them on subjects which should prove of particular interest. A social hour with or without refreshments should follow your meeting.

The social group may be divided into several committees—for example, a Membership Committee, a Telephone Committee, and a Courtesy and Entertainment Committee. The Membership Committee should of course endeavor as far as possible to increase your membership. They should visit the wives of the members of the county medical society, enlisting and stimulating interest in the local work. The Telephone Committee could easily divide the membership list, each taking an equal number of names in case of the necessity for getting direct word to each member on any important business. The time and place of the meeting could thereby be easily impressed upon each member and her attendance earnestly solicited.

The philanthropic group may be divided into as many committees as are deemed necessary in the opinions of the officers of your society to carry on the work. For example, committees might undertake the following:

To visit all the charity wards of the hospitals, taking fruits, flowers, etc.

To take books and toys to the Children's Hospitals and to provide a story hour for the convalescents.

To make layettes for needy mothers, showers of linen and clothing for Baby Hospitals, surgical dressings and aprons for doctors and nurses in their charity work, gowns and bed-jackets for Tuberculosis Hospitals.

To make visits to institutions for the aged, furnishing them with diversion and entertainment.

To provide soldiers, old and young, with games, radios, victrolas, edibles, automobile rides, Christmas trees.

To fill stockings and send to Empty Stocking Crusade, Christmas boxes for the Red Cross for distribution.

To make donations to the Community Chest, and to make loans to needy physicians' families.

The educational group consists of 2 important committees—Education and Program. The latter committee suggests the subjects to be discussed at each meeting and provides the speakers, assists in providing prominent and able speakers on the radio; coöperates with the Chamber of Commerce and their health programs; creates sentiment for County Health units; and assists legislative committees of county medical societies, when needed, in promoting good health measures. The Health Education Committee makes a study of the subjects to be discussed throughout the year, such as health Laws pertaining to county

and state, what constitutes pure milk and water, food and sanitation, midwife problems, history of medicines, lives of great physicians, etc. They offer scholarships to sons and daughters of physicians, and give prizes for the best Essay on Health, Physical Test of School Children, Sanitary School Buildings, Best Drilled Reserve Officers Training Corps, the Boy Scout who makes the best physical record. Some time ago I heard of a case in a rural district where the mother strongly protested against the medical advice given her by a school inspector regarding the condition of her children's teeth. Her reason was that since the father had suffered more or less from toothache all his life the children would have to put up with that painful condition whenever it existed, for it was her idea that whatever was good or bad for the father should be good enough or not too bad for the children. There is an example of the necessity for work for your Committee on Education. A portly colored lady objected to her young daughter's having the Schick Test because she said she had read "sumpin' about them Sheiks" and she did not want any of them around her girls. More education needed!

As you are probably well aware, the one great object of the medical profession at the present time is to teach the public preventive medicine, and since the members of your organization are usually among the most active club members in any community I think of no better way in which we can be assisted in this work than by having your hearty coöperation. We are also greatly interested in the regular physical examination of those who are apparently well, and we feel that if the health condition of the community be freely discussed by the members of your auxiliary it will be of material advantage to the public at large. You can help us in still another matter by encouraging your husbands to attend our medical meetings. Your interest in the auxiliary will prove a stimulus to their activity in the County and State Medical Societies, and it was with the idea of bringing out both of the "better halves" at the same time that the auxiliary meeting date was set to correspond with that of the medical society.

I am very proud of the work of our Executive Secretary, Dr. Reik, and the Assistant Educational Secretary, Mrs. Taneyhill, who have succeeded in organizing 20 auxiliaries out of the 21 county societies in the state. More missionary work is needed in the one remaining county, Hunterdon, I believe. Our local organization, too, has been quite active and is doing very good work. One of your members, Mrs. Beckwith, very kindly helped us by securing several appointments for Mrs.

Taneyhill. Our State Auxiliary is helping us materially with our program this week. Personally, I felt so pleased with their efforts that I insisted they should be given entire charge of this evening's program. I think you will all be very well repaid by attending the concert provided by them this evening.

In conclusion, allow me to encourage each one of you to become more interested in this good work, and I assure you that the medical profession most deeply appreciates your services. I heartily agree with Dr. Wendell Phillips, Ex-President of the A. M. A., when he said in a recent address "May all mankind have the vision of a healthier, happier world, which will blossom into unheard of activity. May we dedicate ourselves through service to all that will advance and maintain and increase the sum of human happiness."

Dr. Mulford, President-Elect of State Society, was presented, and among other things said, "Keep your shoulders to the wheel." Dr. Henry Reik, Executive Secretary of State Medical Society, was present and promised hearty coöperation of the State Society with the Woman's Auxiliary.

The President, Mrs. Lippincott, appointed Mrs. Casselman, of Camden, and Mrs. Blair Stewart, of Atlantic City, delegates to the National Meeting of the Auxiliary soon to meet in Minneapolis. On motion of Mrs. Hubbard (Union) it was voted that Mrs. Stewart have power to select the third delegate from any eligible persons, after arriving at the Convention—carried.

Mrs. Park, a Director of the Woman's Auxiliary of the A. M. A., was a guest and gave greetings.

Secretary read following recommendations offered by the Directors:

(1) Motion by Mrs. Mulford, seconded by Mrs. Rogers, that the Executive Board recommend to the State Auxiliary that the past Presidents become an Advisory Committee of the Executive Board, which would necessitate an amendment to the Constitution—carried.

(2) Moved by Mrs. Mulford, seconded by Mrs. Hunter, that the Executive Board recommend that Mrs. A. Haines Lippincott, confer with the A. M. A. Auxiliary in regard to the State Auxiliaries ending this fiscal year at a date which will coincide with the National—carried.

(3) Motion by Mrs. Mulford, seconded by Mrs. Teimer, that State Board recommend that county auxiliaries regulate their By-Laws to admit to membership, widows, whose husbands were in good and regular standing in counties where they resided—carried.

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Thursday, June 7, 1928, 2:30 p. m.

The afternoon session opened with reports from county auxiliaries.

Atlantic County—Mrs. Massey, President.

This Auxiliary was organized in April, 1927, with 14 members. There is now an enrollment of 56. This is a steady growth, but as there are about 150 physicians in the county it will probably be some years before there will be 100% membership. By doing constructive work the Auxiliary hopes ultimately to attract to its ranks all eligible members.

Mrs. John Beckwith has done much to introduce "Preventive Medicine" into the county.

Mrs. Taneyhill has addressed a meeting to which members of outside clubs were invited.

Results are slow in coming but the active members are not discouraged and are looking to the future for the reward of their efforts.

Essex County—Mrs. Geo. A. Rogers, President.

This Auxiliary was organized in April, 1927, with a membership of 70. The roll of June, 1928, shows an enrollment of 173 paid-up members; the goal for 1929 is to double that number. During the year seven meetings were held, one of which was purely social—the attendance was large. Four meetings were devoted to lectures on matters of interest to women and included a lecture on "Periodic Health Examination", by Mrs. Taneyhill.

At the first regular meeting Mrs. Lippincott, the State President, addressed the members, and with her enthusiastic belief in the future of the auxiliaries, inspired her hearers with the desire to coöperate with the parent medical society in any way which might be asked of them. Through the first year, which seemed many times one of discouragement, her words of advice and foresight have kept up the hearts of those who are making an earnest effort to show that an auxiliary can and shall be the aid that its name implies.

Hudson County—Mrs. William Friele, President.

This Auxiliary has just finished a successful year with a membership of 62. Many eligible for membership have shown a disposition to join in the Fall.

Social sessions have alternated with lectures on health topics and those of civic interest. To these, outsiders have been invited through which engagements for Mrs. Taneyhill have been made.

The outline for the work of the coming year follows the same plan, with the project also of working for some definite philanthropic object.

Somerset County—Mrs. D. S. Renner, President.

The Auxiliary was organized in April, 1927, with 5 members present; at the annual meeting 17 members attended out of the 24 on the roll.

Mrs. Taneyhill has addressed the auxiliary, and through it has spoken before the Somerville High School, the Parent-Teachers' Associations of Montgomery Township, and to the children of the rural schools. To these latter have been given the primer and pamphlet "Go to Your Doctor".

One social meeting has been held during the year.

Union County—Mrs. F. A. Kinch, President.

The Woman's Auxiliary has met throughout the year at the same time and place as the County Medical Society. They have had addresses during the year from prominent people, and have had many social occasions. These latter have created a friendly feeling and have promoted a greater interest in the auxiliary.

A committee has been appointed to write a circular letter giving reasons for organizing our auxiliary, and the scope of its work; this to be sent to every eligible member.

Report of State Public Health Committee, Mrs. D. L. Haggerty, Chairman.

Under the heading of Public Health, as covered by this committee, comes the placing of "Hygeia" where it will favorably affect public health. Since the magazine is published by the A. M. A. there need be no hesitancy in aiding to extend its circulation.

Acting in conjunction with the A. M. A., the chairman of this committee advocates the following organization of the committee:

(1) Educational Branch—Having Hygeia placed in schools, colleges and libraries.

(2) Social Branch—Having Hygeia sponsored by Parent-Teacher, Y. M. C. A., and Y. W. C. A. Associations' Study Circles, Women's Clubs and Fraternal organizations.

(3) Professional Branch—The placing of Hygeia in the waiting rooms of physicians and dentists, in hospitals, and having it supported by Nurses' Associations, Health Departments and Health Associations.

(4) Commercial Branch—Obtaining the endorsement of industrial concerns and having it carried by department stores, railroads, boats, and having it displayed at county demonstrations.

This program would of necessity be carried out through the County Auxiliaries. The first step would mean the appointment of a member of each county on this state committee. The committee member would then appoint subchairmen to handle each branch for that particular county, and thus the state would be covered.

Report of Delegate to Convention on Child Hygiene held in Newark, May 3-4, 1928.—

Mrs. G. A. Rogers appointed delegate from the State Medical Auxiliary.

The lectures and exhibits at this Convention though primarily intended for the graduate nurse, could not but hold the attention of any one interested in child welfare, and all the more any member of the Medical Auxiliary who was privileged to attend.

Miss Mary R. Sullivan, in charge of the exhibits, though overwhelmingly busy and much in demand, gave the auxiliary representative a few minutes of her valuable time. Short as the interview was, it sufficed to show that here certainly was a field for coöperation of the women with the State Department of Health.

Miss Sullivan has promised to outline some suggestions for the auxiliaries' active participation during the coming year in promoting the work under the heading of "Child Hygiene".

The meeting was then addressed by Dr. J. Bennett Morrison, Recording Secretary of the Medical Society of New Jersey.

Dr. Morrison spoke a few words of greeting, and urged the auxiliaries to get engagements for Mrs. Taneyhill to lecture by invitations from the clubs themselves; this being a more dignified way than to ask for an engagement for her. He offered helpful suggestions as to the way auxiliaries might make themselves useful.

Mrs. Taneyhill then gave a résumé of the work she had done through the year, and briefly outlined her method of interesting the children to whom she gave health lectures. (See her report to the House of Delegates.) She spoke of the cultural aspect in educating children in these talks by showing the pictures of great physicians and giving accounts of their lives. Also she showed the help that appealing to their imaginations would give in interesting them in the dramatic possibilities when it came to combating contagious diseases.

Mrs. Lippincott's evening address to the New Jersey State Society, the State Auxiliary, and friends was calculated to arouse to enthusiasm the most lukewarm believer in the future of the auxiliary. Her opening sentences appealed most strongly to all her hearers:—"We love the men, we adore our husbands, we love their profession. We are busy women but always have time for one thing more for our husbands." She advised the members of the auxiliary not to dream dreams and see visions, but to go out and work in the interests of health, to invite to the meetings all female relations of doctors whether members or not. She told them to be proud of the niche they occupy in the medical world, and to show their worth.

After more words of interest and advice,

Mrs. Lippincott treated the audience to a wonderfully dramatic recitation of an inspiring poem, and appreciation was shown by enthusiastic applause.

The concert on Thursday evening was as unique as it was beautiful. Miss Helen Buchanan-Hitner, who has a beautiful voice, accompanied herself most ably. The most devoted lover of harp music must have been satisfied with the program executed by the seven brilliant performers of the Dorothy Johnstone-Baseler Harp Ensemble.

Friday, June 8, 1928, 10 a. m.

Minutes of previous day read and approved.

Treasurer reported a paid-up membership of 575, and a balance in Treasury of \$106.40—approved.

A report of the Nominating Committee was called with following result.

President, Mrs. Orton (Union).

President-Elect, Mrs. Downs (Burlington).

First Vice-President, Mrs. Massey (Atlantic).

Second Vice-President, Mrs. Macalister (Camden).

Third Vice-President, Mrs. Haggerty (Mercer).

Recording Secretary, Mrs. Sommer (Mercer).

Treasurer, Mrs. Hunter (Gloucester).

Directors, Mrs. Culver (Hudson), and Mrs. Newman (Essex).

There being but one nominee for each office, the Secretary was instructed to cast the ballot for above named and the President declared them elected.

Treasurer reported \$375.00 in Annual Convention fund and bills to amount of \$371, leaving balance of \$4. Report received and filed.

Mrs. Russell A. Shirreffs, Chairman of Public Health Committee of State Federation Women's Clubs, presented and delivered an able address on Public Health Work which may be accomplished.

It is a misfortune not to be able to print verbatim Mrs. Russell A. Shirreffs' address to the auxiliary, as she gave such a fund of information, told in such an interesting way as to keep her audience spellbound. She certainly inspired her hearers with enthusiastic desire to take some share, no matter how humble, in the great health work she is promoting. A way for a sphere of activity was pointed out for the Woman's Auxiliary.

The salient points of her discourse are as follows: The contrast between the present day management of Public Health affairs and

that of 50 years ago, when the advice of the city editors was sought in such matters.

The campaign for the use of toxin-antitoxin in the prevention of diphtheria, one of the most important of the present day.

Slogan is "No diphtheria in 1930."

For 13 years there has been no diphtheria in the Epileptic Colony in Skillman owing to preventive measures.

Inoculation saves money.

The yearly inoculation of dogs as a prevention for rabies should be strongly urged.

Bureaus of Child Hygiene have been established, and many more should be.

Baby farms with all their attendant evils have been eliminated.

There has been brought about the educating and licensing of midwives.

Auxiliaries should be urged to visit institutions; to push the half mill tax for institutions, also the sterilization bill. They should help establish psychiatric clinics and psychopathic wards, put public health matters on their programs, and study the methods of the official state boards.

Dr. Henry O. Reik, Editor of the Journal of the Medical Society of New Jersey, then delivered the following address on "Future Work of the Auxiliary:

FUTURE WORK FOR THE WOMAN'S AUXILIARY Ladies:

Just one year ago, I was present at the inaugural meeting of the Woman's Auxiliary to the Medical Society of New Jersey, an organization formed at that time by the cooperative action of delegates from the then-existing auxiliaries to 14 of our county medical societies. It is a decided pleasure to join you today in celebration of your first anniversary and to note that you now embrace representatives from 20 counties; a degree of perfection almost equal to that of Ivory Soap. I am neither a prophet, the son of a prophet, nor a seventh son, but I do not hesitate to predict that the last remaining county will organize during the next month. It is something of a disappointment that the task of organization could not have been completed before this meeting, but that is not a matter of vital importance and instead of bemoaning our imperfection we may turn with justifiable pride to the fact that so much has been accomplished within so short a space of time.

Our attention was first seriously focused upon the auxiliary movement two years ago, when Mrs. W. Wayne Babcock did us the honor of explaining what was being done elsewhere. I am sure you have enjoyed at this meeting receiving from Mrs. Babcock, and

from Mrs. McReynolds, President of the Woman's Auxiliary to the American Medical Association, further information concerning the progress of auxiliary work in other parts of the United States. I understand that you have also reviewed among yourselves the work of the past year and that you have received a number of suggestions relating to plans for future usefulness. It remains for me to discuss with you a few practical points bearing upon further development of this young organization. Before proceeding to that discussion, however, I trust you will permit me, speaking in the name of the officers of the Medical Society of New Jersey, to thank you individually and collectively for the assistance you have given to their representative when he appeared in your respective home counties, and for the service you have since rendered in behalf of their plans to strengthen medical organization and to promote public welfare.

Now, I would not have you think that I look upon this auxiliary as having attained a state of perfect organization. You are, indeed, far from being perfectly organized, if by that term we mean that your organization includes even a major portion of its eligible membership. You have a technical organization properly launched, regularly set up according to rules and regulations, but you have merely started upon your career. We followed the plan of organizing from the county unit upward, and the oldest county society auxiliary in New Jersey is only about 18 months of age, while the youngest is less than one month old. Up to this moment, our energies have been expended mainly in the direction of getting together and constructing a paper organization. It should not be surprising to anyone if it requires 1, 2, or 3 years more to perfect an organization in the sense of having enrolled and secured the support of the major portion of available members. That is the most important piece of work now at hand. Let your efforts be devoted immediately and primarily toward procurement of a larger membership in every county medical society auxiliary. Cape May County has set the pace—where I am told the auxiliary includes every eligible woman in the county—and each county of the state would do well to strive for equalization of that record. The larger the county, the greater the number of eligible members, the more difficult it will be to secure a full membership but that should not deter any auxiliary from trying to enlist the active cooperation of some woman from the family of each and every member of the county medical society.

The next most important duty is to review the organization set up in each county and to

strengthen any weak spots that may be disclosed. We are quite aware of the fact that some of the county auxiliaries have done nothing more than merely organize; that in 2 or 3 counties few, if any, meetings have been held since the one at which organization was effected; that in 2 counties there has arisen in the minds of the local members some doubt as to whether it is desirable to continue the organization. We anticipated just such a state of affairs—it could not be prevented—but we can set to work now to correct the condition. In some districts the real meaning of the auxiliary movement was not understood, and, unfortunately, we could not get around for a second visit during the year. We did not expect any wild enthusiasm for inauguration of auxiliaries anywhere, and we were not terribly surprised that slight opposition should arise in some districts. Perhaps the word "opposition" is too strong to be used in this connection, for, as a matter of fact, the apparent opposition is rather a matter of apathy and lack of understanding. A certain percentage of the members of the State Medical Society, and consequently of the county medical societies, that asked for the establishment of these auxiliaries actually knew very little about the project and did not very well understand what we were trying to do. It was not unnatural that they should question the advisability of setting up a new organization, and in consequence, it is quite natural for the women to hesitate about proceeding further with organizational work. I feel quite sure that this annual meeting of the State Society and of the Auxiliary thereto has demonstrated that the society needs and wants the Auxiliary and that the Auxiliary is willing to work with the Society. You must see to it that a full report of this convention is carried to the county society auxiliaries and that some member of your State Auxiliary shall visit the counties least well organized with a view to stimulating greater local interest in our projects. The physicians in those counties must first be more fully informed, for an auxiliary cannot function properly, cannot in fact even exist, without the active support of the county society. That will be taken care of by the State Medical Society while you are working to revivify the local auxiliary.

Having made sure that we have 21 auxiliaries and that each and every one is ready to function according to its abilities, attention should be drawn to the question of proper utilization of this newly constituted power. This leads me to speak again of the purpose underlying this event. If, as some people might infer from what is said above, we were

going to have a struggle to keep the auxiliaries alive, it would be better that they had not been born. That is not at all the condition; so much consideration has been given to the question of organization and to making certain that each auxiliary is properly organized, only because we desire that these new organizations shall be prepared to function effectively. We wish you to take this project very seriously. The Woman's Auxiliary to the Medical Society is started for a very definite purpose and that purpose is, fundamentally, to aid organized medicine in its public educational work and in its effort to correlate professional and lay schemes for public health advancement. We do wish, incidentally, to establish better social relations among members of physicians' families but we are not spending all this time and labor and money to establish a series of new bridge whist clubs. If card games, dancing, tea parties will help to bring your members together in larger numbers, then make such social functions a part of your meeting programs. But do not allow any of your members to look upon the social aspect of your meetings as the principal reason for their being called together.

There is no state in the union and no county in any state, so far as I am aware, that cannot make good use of a woman's auxiliary to its medical society. There is an abundance of work at hand demanding attention, and willing workers can find plenty of work awaiting. These work problems will differ in different communities. There is no one particular thing that calls for universal consideration, unless we so look upon the wide-spread need for educating the public regarding medical matters, and even that is a need that varies in degree and different regions. The Journal of the State Medical Society devotes a section of several pages monthly to work of the Woman's Auxiliary. During the past year we have made many suggestions of work for county auxiliaries to consider and we can scarcely do better now than to request that you take up the file of these Journals in your own home and read the series of articles that have been running monthly since March, 1927. The larger tasks mentioned include promulgation of medical information to the public, promotion of the sale of Hygeia, and standing in readiness to assist in legislative affairs of local or state concern. In each county there will be other questions of local importance. These include: aid in procuring a hospital or in securing supplies and funds to support an existing hospital in the county; aid in disseminating information or instructions related to health campaigns, such as the one now under way

for the abolition of diphtheria; aid in enforcing local health laws and compliance with rules that require birth registration and disease reporting; aid in securing a suitable home, headquarters or meeting place for the county society and for making that a center for the distribution of literature informing the public as to disease prevention measures. There are many things that will occur to each of you as particularly applicable to your own home district. Any of these questions may be taken under consideration and may be carried to the county medical society with which your auxiliary is associated, as suggestions of work that needs to be done.

The trend of the times in our country is to combine forces, to coordinate and correlate existing institutions, to conserve energy and direct available forces in such manner as to utilize them most effectively. On a dining car of the Pennsylvania Railroad, I picked up a menu card upon the back of which was the following statement: "There are few occupations in which the men employed therein find more encouragement from their wives in their chosen calling than is the case with railroad men. It has become the custom for the women to band together in organizations that may be considered coordinate with those formed by their husbands, and they find many ways in which they can be of service * * * * What these organizations are doing is convincing proof of the beneficial results of the cooperation of men and women in undertakings where there is, or should be, a common interest. Such activities have a tendency, also, to promote friendly relations among the men and between their families, which is helpful to any community * * * Like soldiers, many of them are subject to assignment to most any kind of service at any time of the day or night. Yet they know that the service their company must give the public depends

on the service they in turn give the company. If all business could be manned along the same line with employees who have the same conscientious regard for their obligations, the commercial world would be more stable than it now is."

Could anything have been written of a trade organization that would be more completely applicable to our professional interests? With change of a very few words, that article, which by the way was entitled, "The Help of Women", might well have been written for this society and for this occasion. I commend its import to your consideration.

Chairman of Credentials reported 54 delegates and 38 visitors.

Dr. Reik presented Mr. F. J. Osborne, Public Health Officer of East Orange, who spoke briefly. The newly elected officers were installed. The retiring first President, Mrs. Lippincott, presented the auxiliary with a gavel. On motion of Mrs. Massey, it was voted that the very fine address delivered by Mrs. Lippincott on the previous evening at the Social Meeting be incorporated in the minutes of the Society. It was so ordered.

The meeting adjourned at noon to attend the session of the State Society and listen to address of the retiring President, Dr. Walt P. Conaway.

At the social gathering on Friday afternoon, a large number attended and played cards. Before all were too deeply engaged Mrs. Orton asked for a few moments' attention.

In the name of the County Auxiliaries she presented Mrs. Lippincott with a keepsake, as a small token of the esteem and affection in which she is held throughout the state, and in appreciation of the fine work she has done in this the difficult first year of organization.

Adaline W. Stillwell,
Recording Secretary.

MEETINGS OF THE COUNTY SOCIETIES

Atlantic County.—Meets Friday evenings monthly, except in June, July, August and September. Annual Meeting in November.

Bergen County.—Meets on second Tuesday each month, except July and August. Annual Meeting in October.

Burlington County.—Meets second Wednesday afternoon of January, March, May, July, September and November. Annual Meeting in November.

Camden County.—Meets second Tuesday in each month, October to May. Annual Meeting in October.

Cape May County.—Meets on first Tuesday in April and October. Annual Meeting in October.

Cumberland County.—Meets on the first Tuesday after the first Monday of January, April, July and October. Annual Meeting in October.

Essex County.—Annual Meeting is the first Tuesday in October. Other meetings on the second Thursday of each month, November to May on call of President.

Gloucester County.—Regular Meetings on the third Thursday of each month, October to June, inclusive. Annual Meeting in November. Annual Social Session in September.

Hudson County.—Meets first Tuesday evening of each month, October to May, inclusive. Annual Meeting in May.

Hunterdon County.—Meets on the fourth Tuesday of January, April, July and October, the latter being the Annual Meeting.

Mercer County.—Meets on the second Wednesday of each month, except July, August and September, at 8.15 p. m., in the City Hall at Trenton. Annual Meeting in December. Annual Banquet in November.

Middlesex County.—Meets on the second Wednesday afternoon of January, March, May, July, September and November. Annual Meeting in November.

Morristown County.—Meets on the last Wednesday in each month from October to June inclusive. Annual Meeting on the Tuesday after the first Monday in December.

Morris County.—Meets on the second Tuesday in March, June, September and December. Annual Meeting in September.

Ocean County.—Meets in May and November as called by the Secretary. Annual Meeting in November.

Passaic County.—Meets on the second Thursday evening of each month, except June, July and August. Annual Meeting in October.

Somerset County.—Meets on the second Thursday afternoon in February, April, June, October and December. Annual Meeting in October.

Salem County.—Meets on the second Wednesday in February, April, October and December. Annual Meeting in October.

Sussex County.—Annual Meeting on the second Tuesday in May and September; other meetings at call of the Secretary.

Union County.—Meets on the second Wednesday of January, April, July and October. Annual Meeting in October.

Warren County.—Meets on second Tuesday of January, April, July and October; the last named being the Annual Meeting.

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